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Limnological Results from the 1983 British Columbia Lake Enrichment Program

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LIMNOLOGICAL RESULTS FROM THE 1983 BRITISH COLUMBIA LAKE ENRICHMENT PROGRAM

by

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ABSTRACT

Nidle, B. H., K. S. Shortreed, and K. V. Masuda. 1984. Limnological results from the 1983 British Columbia Lake Enrichment Program. Can. MS Rep. Fish. Aquat. Sci. 1752: iv + 212 p.

Results of the 1983 limnology subprogram of the British Columbia Lake Enrichment Program (LEP) are presented. Twenty-two stations in 15 lakes were sampled for a variety of physical, chemical, and biological variables. The number of times each lake was sampled ranged from one to eight, but most lakes were sampled once monthly from April or May to October. Summarized data for each station and date are presented, and raw data are contained in the appendix tables.

Key words: lake fertilization, humic-stained, glacially turbid, warm monomictic, oligotrophic, nutrients, bacteria, ultraphytoplankton, phytoplankton, zooplankton.

RÉSUMÉ

Nidle, B. H., K. S. Shortreed, and K. V. Masuda. 1984. Limnological results from the 1983 British Columbia Lake Enrichment Program. Can. MS Rep. Fish. Aquat. Sci. 1752: iv + 212 p.

Le présent rapport porte sur les résultats obtenus en 1983 dans le cadre du sous-programme limnologique du Programme d'enrichissement des lacs (PEL) de la Colombie-Britannique. On a échantillonné 22 stations réparties dans 15 lacs pour la collecte de diverses données physiques, biologiques et chimiques. Chaque lac a été visité de une à huit fois quoique la plupart ont été échantillonnés mensuellement d'avril ou mai à octobre. Les données pour chaque station et date sont résumées et les données brutes sont présentées dans les tableaux de l'appendice.

Mots clés: fertilisation lacustre, coloré d'acide humique, glaciaire turbide, monomictique chaud, oligotrophe, bioéléments, bactéries, ultraphytoplancton, phytoplancton, zooplancton.

INTRODUCTION

The Lake Enrichment Program (LEP), under the auspices of the Federal-Provincial Salmonid Enhancement Program (SEP), commenced in 1977 with the fertilization and study of six lakes. In 1983, 13 lakes were fertilized and samples were collected from 15 lakes. Earlier work on many of these lakes and the rationale and objectives of these continuing studies have been previously reported by Stockner (1979), Stockner and Shortreed (1978; 1979), Stockner et al. (1980), Shortreed and Stockner (1981), MacIsaac et al. (1981), and Costella et al. (1982; 1983a; 1983b). After further analysis, data presented in this report will be used to determine the effect of fertilizer additions on treated lakes, and to calculate appropriate fertilizer loads in untreated lakes which are candidates for fertilization.

DESCRIPTION OF STUDY LAKES

The 15 lakes sampled during 1983 represented a wide variety of morphometric and hydrologic types (Table 1, Fig. 1). All study lakes are oligotrophic and most are warm monomictic, however Kitlope Lake is dimictic and Henderson Lake is meromictic. Of the 15 lakes studied, eight were humic-stained, six were clear, and one was glacially turbid. As a result, average Secchi depths ranged from 2 m to 14 m. The lakes have relatively small littoral zones, low inorganic nutrient levels, low phytoplankton biomass (Shortreed and Stockner 1981), low bacterioplankton biomass (MacIsaac et al. 1981), and low zooplankton biomass (Rankin and Ashton 1980; Rankin et al. 1979). Maps showing station locations are presented in Fig. 2-16.

METHODS

Lakes in this study were fertilized once a week for 16 or 19 weeks during the growing season with the exception of Great Central, Henderson, and Hobiton lakes, which were fertilized twice a week. The fertilizer was an aqueous solution of ammonium nitrate and ammonium phosphate in an N:P atomic ratio of 15:1, with the exception of the fertilizer applied to Kennedy Lake (station 1), which had an N:P atomic ratio of 35:1. Fertilizer was applied using a DC-6B water bomber and fertilizer application techniques are described in Stephens and Stockner (1983). Fertilizer loads to lakes in 1983 are presented in Table 1.

Lakes were sampled monthly commencing in April or May with the exception of Kitlope Lake, which was sampled once in September, and Muriel Lake, which was sampled four times (May, August, September, and October). Float-equipped de Havilland Beaver aircraft were used to sample all lakes except Sproat Lake, which was sampled from a boat.

Temperature profiles to a maximum depth of 50 m were obtained at each station using a Montedoro-Whitney temperature probe (Model TC-5C). Buoyancy frequencies (s^{-1}) were calculated (Turner 1973) and used to determine epilimnion depth. Water temperature and an equation of state (Chen and Millero 1977) were used to calculate density. A modified Schmidt stability function was calculated to quantify the convective stability to a depth of 50 m (Johnson and Merritt 1979).

A Li-Cor light meter (Model 185A) equipped with a Li-Cor underwater quantum sensor (Model Li-192S) was used to measure photosynthetically active radiation (PAR: 400-700 nm) from the surface to the compensation depth (1% of surface intensity) and vertical light extinction coefficients were calculated. A standard 22-cm white Secchi disk was used to measure water transparency.

A 6-L Van Dorn bottle, rinsed with 95% ethanol, was used to collect all water samples. Samples were usually collected between 0800 and 1200 h. Samples for nutrient analyses were collected from 1, 3, 5, and 30 m at all lakes except Great Central and Sproat lakes, where samples from 1, 3, 5, 23, and 40 m were collected. An unfiltered portion of the sample was placed into a clean, rinsed test tube, stored in the dark at 4°C and analyzed later for total phosphorus. Samples for the remaining nutrients and chlorophyll were stored from 2 to 4 h in 1-L or 2-L polyethylene bottles and kept cold and in the dark. At the field laboratory 47-mm Whatman GFF filters, which had been previously ashed and washed with 500 mL of distilled water, were used to filter the nutrient samples. The filter was placed in a 47-mm Swinnex (Millipore Corp.) filtering unit, rinsed with an additional 500 mL of distilled water, and then rinsed with sample. One filter was generally used to filter all samples from each station unless high algal biomass inhibited filtering efficiency. A rinsed glass bottle was filled with 100 mL of filtered sample, covered with aluminum foil, and capped tightly. This sample was analyzed later for nitrate, total dissolved nitrogen, and ammonia. Approximately 100 mL of sample were filtered into a rinsed plastic bottle and analyzed later for soluble reactive silicon and total dissolved solids. All samples were stored cold and in the dark and chemical analyses were done according to those methods given in Stephens and Brandstaetter (1983).

A 1-L sample was filtered through an ashed, 47-mm diameter Whatman GFF filter. Filters were folded in half, dried in a dessicator overnight, and stored frozen prior to being analyzed for particulate carbon and nitrogen using a Perkin-Elmer CHN analyzer (Model 240). Particulate carbon and nitrogen values are not reported here. A 2-L sample was filtered through an ashed, 47-mm diameter Whatman GFF filter. Filters were placed into a clean scintil-

lation vial and analyzed later for particulate phosphorus. A 500-mL sample was filtered under subdued light through a 47-mm diameter, 0.8-µm Millipore AA filter and a few drops of $MgCO_3$ suspension were added. Filters were folded in half, dried in a dessicator overnight, stored frozen, and analyzed later for total chlorophyll using a Turner fluorometer (Model 112).

At stations where primary production was measured, glass jars were filled completely with water (generally from 1 or 2 and 7.5 m), covered with parafilm, and transported to the field laboratory. These samples were collected to measure pH and total alkalinity according to the standard potentiometric method (APHA 1976), using a 100-mL subsample, 0.01 N H_2SO_4, and a Cole-Parmer Digi-Sense pH meter (Model 5986-10). Dissolved inorganic carbon (DIC) was estimated indirectly from pH, temperature, total dissolved solids, and bicarbonate alkalinity (APHA 1976). At Bonilla and Curtis lakes, where primary productivity was also measured, samples for DIC analyses were collected from eight depths in 50-cc plastic syringes and 1 mL of 1.0 N H_2SO_4 was added in the field. Samples and standards were analyzed for DIC within 4 h of collection using a Carle gas chromatograph (Model 211 M) and using the method given by Stainton et al. (1977). Standards were prepared daily from a factory standard (1000 mg $C \cdot L^{-1}$) and deionized water. Duplicates of each standard were made (10, 5, 2, 0.5 mg $C \cdot L^{-1}$ and a blank) and 1.0 mL of 1.0 N H_2SO_4 was added. To each sample 30 mL of helium gas (zero grade) were added then the sample was agitated for approximately 15 s. Samples were kept in an ice bath prior to injection into the gas chromatograph.

Test tubes rinsed with 95% ethanol were rinsed and filled with water from 1, 3, 5, and 30 m (1, 3, 5, 23, and 40 m at Great Central and Sproat lakes) for bacteria enumeration. In the field laboratory 5 mL from each depth were filtered onto a 25-mm diameter, 0.2-µm Nuclepore membrane filter counter-stained with Irgalan black. Filters were removed when just dry, placed into a 9-cm divided petri dish lined with Whatman filter paper, air-dried at room temperature, and stored. Samples were counted later using the acridine orange direct count method as described by MacIsaac et al. (1981). Generally 300 bacteria or 10 fields were enumerated and counts converted to numbers $\cdot mL^{-1}$.

Samples for phytoplankton enumeration and identification were collected from 1, 3, 5, and 30 m (1, 3, 5, 23, and 40 m at Great Central and Sproat lakes) in opaque, 125-mL polyethylene bottles and transported to the field laboratory. Ultraphytoplankton (<3 µm equivalent spherical diameter) were preserved by filtering 15 mL of each sample onto a counter-stained (Irgalan black), 25-mm diameter, 0.2-µm Nuclepore memebrane filter in the same manner as for bacteria biomass. Filters were air-dried and stored in opaque, 9-cm petri dishes at room temperature until counted. Just prior to ultraphytoplankton identification and enumeration, each filter was placed on top of a piece of Nitex mesh in a Millipore filtering unit and rehydrated with 1-2 mL of cold, filtered distilled water for approximately 3 min. The water was then drawn through and the moist filter placed on a microscope

slide, followed by a drop of Cargille Type A immersion oil, a coverslip, and another drop of oil. Counts were done at 1250X magnification using a Zeiss compound microscope (Model KLSM) equipped with a IV/FL epifluorescent condenser, HBO 50-W mercury lamp, LP 397 and KP 560 exciter filters, FT 580 beam spitter, and LP 590 barrier filter. Random fields were counted and values were converted to numbers$\cdot m^{-3}$ and volume ($mm^3 \cdot m^{-3}$). A minimum of 200 cells or 30 fields were counted per sample. The remainder of each sample was fixed with 1 mL of Lugol's acid solution and used for enumeration of nano- and netplankton (>3 um equivalent spherical diameter). Samples were shaken and settled overnight in 7-, 12-, or 27-mL settling chambers. One transect at 187.5X and one at 750X magnification were counted using a Wild M40 inverted microscope equipped with phase contrast optics. Counts were converted to numbers$\cdot m^{-3}$ and volume ($mm^3 \cdot m^{-3}$). The carbon content of the phytoplankton was calculated (Strathmann 1967) and expressed as mg C$\cdot m^{-3}$.

Primary productivity was measured at selected lakes and stations (Bonilla, Curtis, Kennedy-1 and -2, and Sproat-1 and -2) at eight depths in the water column (Table 3). One 125-mL light bottle was filled with water from each depth and dark bottles were filled with water from depths of 1, 3, 5, and 15 m. Each bottle was inoculated with approximately 123 kBq of a ^{14}C-bicarbonate stock solution except those in Sproat Lake, which were inoculated with 370 kBq. At each station activity of the stock solution was determined by inoculating three scintillation vials containing 0.5 mL of Scintigest (Fisher Scientific). Bottles were incubated at their respective depths for 1.5 to 2 h, generally between 0900 and 1200 h. After incubation, bottles were placed in dark boxes and transported to the field laboratory where filtration started within 2 h after incubation stopped. Three 25-mL aliquots were removed from each bottle and filtered through 47-mm diameter Nuclepore filters (0.2-, 3.0-, and 8.0-µm pore size) at a vacuum not exceeding 20 cm Hg. Filters were placed into scintillation vials containing 0.5 mL of Scintigest. All vials were stored cold in the dark. At the laboratory, 10 mL of Scintiverse II (Fisher Scientific) were added to each scintillation vial. Samples were counted in a Packard Tri-Carb 460C Liquid Scintillation counter. Quench series composed of the same scintillation cocktail and filters as used for samples were used to determine counting efficiency and Strickland's (1960) equation was used to calculate primary production rates. Production was converted from hourly to daily rates using light data collected with Li-Cor printing integrators (Model 550) equipped with Model 190S quantum sensors. Integrators were located at Bonilla, Sproat, and Kennedy lakes.

Zooplankton were collected at every station using a 100 um mesh size SCOR-UNESCO net (mouth area = 0.25 m^2) which was hauled vertically at approximately 0.5 m$\cdot s^{-1}$ from 25 m to the surface in Awun, Bonilla, Curtis, Eden, Ian, Kitlope, Nimpkish, Muriel, and Yakoun lakes, and from 50 m to the surface in the remainder of the study lakes. Zooplankton were preserved in a borax-buffered, 4% formalin-sucrose solution (Haney and Hall 1973). In the laboratory each sample was halved using a Folsom plankton splitter. One portion was filtered onto an ashed and weighed Whatman GFC filter, dried to a constant

weight at 90°C for 24 h and weighed. These samples were then ashed (460°C for 4 h) and weighed again. Zooplankton biomass was expressed as mg dry weight·m^{-3} and mg ash-free dry weight·m^{-3}. The other portion of the sample was used for zooplankton identification and enumeration, which will be reported elsewhere.

RESULTS

Results are presented as monthly means and time-weighted growing season averages in Tables 4-36. Raw data tables for each lake, station, and date are presented in Appendix Tables 1-136. Many of the ammonia values presented are much higher than expected, and were likely contaminated. For this reason, average epilimnetic and seasonal averages were not calculated.

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Table 1. Geographic and hydrologic data from, and fertilizer additions to, the 1983 study lakes.

Lake	Latitude (N)	Longitude (W)	Elevation (m)	Lake area (km^2)	Mean depth (m)	Water residence time (y)	Fertilizer load (mg $P/m^2/wk$)
Awun	53°36'	132°35'	16	4.9	47	0.9	3.82
Bonilla	53°31'	130°15'	10	2.3	34	1.0	13.97
Curtis	53°30'	129°50'	10	3.0	34	0.6	4.31
Eden	53°51'	132°43'	52	5.9	43	0.9	3.41
Great Central	49°22'	125°15'	82	51.0	212	7.3	2.76
Henderson	49°05'	125°02'	15	15.0	109 (43)[a]	3.2 (1.3)[a]	5.62
Hobiton	48°45'	124°49'	15	3.6	36	1.0	3.93
Ian	53°45'	132°35'	35	20.0	50	1.1	2.54
Kennedy-Clayoquot	49°08'	125°35'	4	17.0	51	1.7	4.00
Kennedy-Main	49°04'	125°30'	4	47.0	27	0.9	0
Kitlope	53°07'	127°13'	15	12.0	86	0.4	3.96
Long	51°14'	127°10'	15	21.0	73	1.1	5.00
Muriel	49°08'	125°36'	11	1.5	22	1.0	0
Nimpkish	50°25'	126°57'	20	37.0	162	1.4	3.80
Sproat	49°14'	125°06'	29	41.0	59	8.0	0
Yakoun	53°19'	132°17'	107	8.1	39	2.5	3.67

[a] numbers in brackets are the result of calculating the lake volume using only the mixolimnion.

Table 2. Legend for Table 3.

Symbol	Variables measured
A	-physical variables (Secchi depth, 0-50 m temperature profile, light profile to compensation depth)
B	-ammonia, total dissolved nitrogen, nitrate, total phosphorus, soluble reactive silicon, total dissolved solids
C	-B (above) plus particulate carbon, nitrogen, and phosphorus
D	-total chlorophyll
E	-ultraphytoplankton and phytoplankton identification and enumeration
F	-bacteria biomass
G	-zooplankton biomass (vertical haul 0-25 m)
H	-zooplankton biomass (vertical haul 0-50 m)
I	-primary production and dissolved inorganic carbon at 0,1,2,3,5,7.5,10,15,23 m -pH and total alkalinity generally at 1 or 2 and 7.5 m

Table 3. Physical, chemical, and biological variables measured at each lake during the 1983 study.

Lake and station	Variables [a]	Depths sampled (m)	Number of sampling dates
Awun	A,B,D,E,F,G	1,3,5,30	6
Bonilla-2	A,B,C,D,E,F,G,I	0,1,2,3,5,7.5,10,15,30[a]	6
Curtis-2	A,B,C,D,E,F,G,I	0,1,2,3,5,7.5,10,15,30[a]	6
Eden	A,B,D,E,F,G	1,3,5,30	6
Great Central-1	A,B,C,D,E,F,H	1,3,5,23,40	8
Great Central-2	A,B,C,D,E,F,H	1,3,5,23,40	8
Henderson-2	A,B,C,D,E,F,H	1,3,5,30	7
Hobiton	A,B,C,D,E,F,H	1,3,5,30	7
Ian-1	A,B,D,E,F,G	1,3,5,30	6
Ian-2	A,B,D,E,F,G	1,3,5,30	6
Kennedy-1	A,B,C,D,E,F,H,I	0,1,2,3,5,7.5,10,15,30[a]	7
Kennedy-2	A,B,C,D,E,F,H,I	0,1,2,3,5,7.5,10,15,30[a]	7
Kitlope	A,B,C,D,E,F,G	1,3,5,30	1
Long-1	A,B,C,D,E,F,H	1,3,5,30	7
Long-2	A,B,C,D,E,F,H	1,3,5,30	7
Muriel-1	A,B,C,D,E,F,G	1,3,5,30	4
Muriel-2	A,B,C,D,E,F,G	1,3,5,30	1
Nimpkish-1	A,B,C,D,E,F,G	1,3,5,30	7
Nimpkish-2	A,B,C,D,E,F,G	1,3,5,30	7
Sproat-1	A,B,C,D,E,F,H,I	0,1,3,5,7.5,10,15,23,40[b]	8
Sproat-2	A,B,C,D,E,F,H,I	0,1,3,5,7.5,10,15,23,40[b]	8
Yakoun	A,B,C,D,E,F,G	1,3,5,30	6

[a] primary production was measured at eight depths (0,1,2,3,5,7.5,10 and 15 m), nutrients at 1,3,5 and 30 m, and dissolved inorganic carbon (DIC) generally at 2 and 7.5 m.

[b] primary production was measured at eight depths (0,1,3,5,7.5,10,15 and 23 m), nutrients at 1,3,5,23 and 40 m, and dissolved inorganic carbon (DIC) generally at 1 and 7.5 m.

Table 4. Monthly sampling dates for the 1983 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Awun		10	14	12	17	13	12		
Bonilla		11	15	13	18	14	13		
Curtis		11	15	13	18	14	13		
Eden		10	14	12	17	13	12		
Great Central-1	16	21	24	22	26	23	28		6
Great Central-2	16	21	24	22	26	23	28		6
Henderson	16	21	24	22	26	23	28		
Hobiton	16	21	24	22	26	23	28		
Ian-1		10	14	12	17	13	12		
Ian-2		10	14	12	17	13	12		
Kennedy-1	15	19	23	21	25	22	27		
Kennedy-2	15	19	23	21	25	22	27		
Kitlope						12			
Long-1	13	18	21	19	23	20	29		
Long-2	13	18	21	19	23	20	29		
Muriel-1		10			25	22	27		
Muriel-2		10							
Nimpkish-1	13	17	21	19	23	20	25		
Nimpkish-2	13	17	21	19	23	20	25		
Sproat-1	19	20	28	23	27	28		8	7
Sproat-2	19	20	28	23	27	28		8	7
Yakoun		10	14	12	17	13	12		

Table 5. Variation in surface temperature during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$ [a]
Awun		12.6	14.5	16.1	17.0	14.6	11.5			15.0
Bonilla		12.7	14.3	15.0	17.3	13.6	11.2			14.6
Curtis		14.3	14.5	15.6	16.7	14.0	10.5			15.0
Eden		11.0	13.5	15.6	16.2	14.3	11.1			14.2
Great Central-1	9.9	15.1	16.4	18.1	20.6	17.7	12.6	10.6	6.5	16.3
Great Central-2	9.5	16.0	15.7	19.0	20.6	17.7	12.4	10.2	6.6	16.4
Henderson	9.7	14.1	15.4	18.0	19.6	17.2	12.7			15.8
Hobiton	10.5	15.4	16.9	19.4	20.0	16.6	12.0			16.4
Ian-1		10.1	13.5	15.5	16.5	14.3	11.8			14.1
Ian-2		9.8	13.2	15.5	16.7	14.5	12.1			14.1
Kennedy-1	10.4	15.2	16.0	18.7	20.5	17.0	11.6			16.3
Kennedy-2	10.2	14.9	16.4	18.0	20.3	17.0	11.6			16.2
Kitlope						10.9				
Long-1	7.4	11.4	15.4	18.6	17.5	14.9	9.5			14.7
Long-2	8.7	11.9	15.6	16.4	17.0	15.1	9.9			11.6
Muriel-1		15.4			21.0	18.0	12.0			17.7
Muriel-2		14.2								
Nimpkish-1	6.9	11.1	14.6	15.7	17.3	15.1	11.5			14.1
Nimpkish-2	7.0	10.4	14.4	15.9	16.4	15.1	12.0			13.8
Sproat-1	11.7	15.4	16.0	19.4	20.6	17.0		11.4	7.4	17.0
Sproat-2	13.5	15.8	18.1	19.5	20.8	17.0		11.1	7.6	17.5
Yakoun		12.8	14.5	15.9	16.9	14.4	11.5			14.9

[a] time-weighted growing season average

Table 6. Variation in mean epilimnetic temperature during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		10.4	14.5	15.3	15.5	13.5	10.8			13.9
Bonilla		12.5	13.7	13.6	15.7	13.0	11.1			13.6
Curtis		12.7	13.2	14.4	14.0	13.3	10.1			13.3
Eden		10.7	13.6	14.5	15.8	13.7	10.9			13.7
Great Central-1	6.4	13.9	15.0	16.4	20.0	17.1	13.3		6.2	15.2
Great Central-2	6.9	15.0	14.9	17.2	20.3	17.0	12.9		6.4	15.5
Henderson	9.2	13.2	14.6	16.2	19.3	16.7	13.2			15.1
Hobiton	10.2	15.1	15.8	18.9	20.0	16.0	13.1			16.1
Ian-1		9.9	13.7	14.2	15.2	12.8	11.2			13.3
Ian-2		9.6	13.4	14.3	16.6	14.4	11.7			13.8
Kennedy-1	9.5	14.4	15.4	18.0	20.4	16.0	12.5			15.7
Kennedy-2	8.7	13.9	16.0	17.5	20.2	16.7	13.4			15.8
Kitlope						11.4				
Long-1		10.8	13.0	15.3	16.5	11.9	9.5			13.2
Long-2		11.4	13.8	16.5	17.0	14.1	11.1			14.4
Muriel-1		14.2			21.1	16.8	13.2			17.3
Muriel-2		13.5								
Nimpkish-1		10.6	13.6	14.5	17.1	14.5	13.2			14.3
Nimpkish-2		10.2	12.1	13.1	15.9	14.5	13.2			13.4
Sproat-1	11.0	13.4	16.1	18.9	20.3	16.2		11.9	7.1	16.1
Sproat-2	11.1	14.1	16.8	18.2	20.3	15.9		12.2	7.5	16.2
Yakoun		12.0	13.6	15.3	17.2	14.5	10.9			14.4

Table 7. Variation in depth of maximum stability (m) during the 1983 study. (U denotes an unstable water column)

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		8.8	7.6	8.2	10.4	14.9	17.0			10.4
Bonilla		5.8	10.9	12.8	10.2	14.4	17.4			11.5
Curtis		5.8	9.9	7.2	12.0	10.9	16.3			9.7
Eden		9.6	8.4	8.9	10.0	12.8	18.4			10.3
Great Central-1	U	7.1	9.4	9.2	8.1	10.6	15.1		29.0	9.8
Great Central-2	U	4.2	10.4	8.8	6.7	11.8	14.8		U	9.6
Henderson	10.0	15.6	15.8	14.3	13.6	15.0	15.4			14.5
Hobiton	7.0	6.8	8.6	3.8	6.1	9.4	16.0			7.8
Ian-1		11.8	10.8	13.2	15.2	22.9	20.0			15.3
Ian-2		13.9	11.0	10.5	9.4	16.7	21.5			12.9
Kennedy-1	6.6	5.6	5.3	4.8	5.6	8.6	18.8			7.1
Kennedy-2	U	9.0	8.8	6.0	7.0	9.9	15.5			12.5
Kitlope						0.2				
Long-1		13.1	3.6	5.9	11.0	21.2	37.0			11.5
Long-2		8.0	6.6	4.4	5.8	10.0	22.7			7.6
Muriel-1		3.8			3.8	6.2	9.6			4.8
Muriel-2		4.6								
Nimpkish-1		13.0	20.2	21.8	16.8	20.5	32.0			20.1
Nimpkish-2		18.5	29.8	32.4	21.0	29.4	43.4			28.8
Sproat-1	6.0	9.2	8.0	7.0	8.2	12.2		12.5	27.6	9.0
Sproat-2	6.4	7.1	9.8	8.6	8.9	13.1		12.5	26.0	9.5
Yakoun		5.9	8.1	7.3	6.1	9.2	13.6			7.8

Table 8. Variation in modified Schmidt stability index ($kg \cdot s^{-2}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		2528	3984	5086	5140	3528	1350			4030
Bonilla		3422	4267	4055	6499	2551	1422			4145
Curtis		4772	3646	5640	5978	3065	1094			4545
Eden		1926	3032	4226	4960	3099	1464			3500
Great Central-1	1432	3559	4806	7981	7304	5558	2296	1601	84	5035
Great Central-2	1229	4265	3348	7224	8286	4642	2487	1684	37	4820
Henderson	1120	3150	3378	5272	6587	5005	2076			4091
Hobiton	1700	4820	5356	8668	8665	4475	2292			5567
Ian-1		1478	1836	4325	4947	2815	1266			3082
Ian-2		945	2241	3234	3304	2368	1400			2458
Kennedy-1	1430	4693	3820	8588	10374	5496	2215			5734
Kennedy-2	1205	3422	4626	8071	9130	4710	1611			5156
Kitlope						962				
Long-1		1358	3762	7570	5315	2315	537			4242
Long-2		1885	4543	5476	4922	3142	995			4067
Muriel-1		3530			11141	7910	3092			7305
Muriel-2		2275								
Nimpkish-1		1365	1939	2239	2393	1371	368			1781
Nimpkish-2		759	1589	2001	2385	1875	1184			1745
Sproat-1	2443	3563	4978	7509	7091	3824		1846	130	5046
Sproat-2	4053	5311	6012	6927	7431	4087		1906	229	5587
Yakoun		3213	4131	4344	7047	3749	2009			4462

Table 9. Variation in Secchi depth (m) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		5.0	4.0	4.0	3.5	3.0	3.0			3.8
Bonilla		3.5	4.5	3.0	2.0	2.0	2.5			3.0
Curtis		7.5	3.0	4.0	3.5	5.0	4.5			4.3
Eden		4.0	2.5	5.0	3.5	3.5	2.0			3.6
Great Central-1	10.0	10.0	7.0	10.5	13.0	10.5	10.0		7.0	10.2
Great Central-2	8.0	8.0	9.5	9.0	13.0	8.5	10.0		6.0	9.5
Henderson	7.0	7.0	7.5	4.5	5.0	6.5	5.5			6.1
Hobiton	7.5	6.0	7.0	5.5	4.5	5.5	4.5			5.8
Ian-1		4.0	3.0	3.0	3.5	3.5	2.0			3.2
Ian-2		3.0	3.0	3.0	2.5	2.5	2.0			2.7
Kennedy-1	7.5	4.5	4.0	4.5	4.2	4.5	5.5			4.7
Kennedy-2	5.5	6.5	6.5	6.0	5.0	6.0	6.5			6.0
Kitlope						3.0				
Long-1	6.5	5.0	3.5	3.5	2.5	3.0	3.5			3.8
Long-2	5.5	5.5	3.0	4.0	3.0	3.8	4.5			4.1
Muriel-1		4.5			4.5	4.5	4.5			4.5
Muriel-2		4.0								
Nimpkish-1	7.5	4.5	6.5	4.0	5.0	4.0	4.5			4.9
Nimpkish-2	7.0	4.5	7.0	4.0	5.0	4.0	4.5			5.0
Sproat-1	9.0	10.0	11.0	11.5	14.0	13.0		8.0	6.5	11.4
Sproat-2	10.5	11.5	11.0	13.0	13.5	13.0		9.0	7.0	12.0
Yakoun		5.0	5.0	5.0	3.5	4.5	4.0			4.5

Table 10. Variation in compensation depth (m) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		5.7	5.7	5.4	4.6	3.7	3.6			4.9
Bonilla		5.1	5.5	4.1	3.4	3.0	3.4			4.1
Curtis		7.3	7.4	5.3	5.6	4.9	5.0			6.0
Eden		4.9	5.0	5.2	4.3	2.6	2.7			4.3
Great Central-1	14.1	13.1	18.5	14.5	18.6	15.9	17.0		14.1	16.0
Great Central-2	13.2	13.1	17.7	14.2	14.2	17.2	13.4		10.9	14.9
Henderson	10.1	9.3	10.7	8.2	8.9	9.2	9.6			9.4
Hobiton	7.6	9.0	8.6	6.7	6.4	6.2	6.5			7.2
Ian-1		4.4	5.5	4.7	3.8	3.2	3.3			4.3
Ian-2		3.9	3.7	3.4	3.0	2.5	2.1			3.2
Kennedy-1	9.6	9.2	9.6	9.6	8.8	8.4	7.0			9.0
Kennedy-2	7.8	7.8	9.2	8.9	10.1	8.7	9.0			8.8
Kitlope						6.6				
Long-1	7.5	8.0	6.7	6.7	7.4	6.2	4.2			7.0
Long-2	7.1	6.9	6.5	7.0	7.0	6.1	7.2			6.8
Muriel-1		6.1			5.7	5.4	4.5			5.6
Muriel-2		5.5								
Nimpkish-1	8.0	9.7	10.6	10.4	9.4	7.2	10.4			9.5
Nimpkish-2	6.4	10.3	11.4	10.1	10.1	7.8	9.4			9.7
Sproat-1	15.8	18.4	20.6	17.2	17.4	19.8		17.5	17.4	18.4
Sproat-2	16.4	19.9	36.9	19.7	17.9	21.5		17.9	18.0	21.9
Yakoun		7.5	7.0	6.4	5.0	5.4	5.0			6.1

Table 11. Variation in mean extinction coefficient (k_e) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		0.77	0.68	0.81	0.93	1.10	1.19			0.88
Bonilla		0.85	0.79	1.03	1.21	1.39	1.31			1.07
Curtis		0.62	0.54	0.73	0.72	0.88	0.87			0.70
Eden		0.89	0.85	0.82	1.00	1.61	1.68			1.06
Great Central-1	0.31	0.33	0.24	0.29	0.24	0.27	0.25		0.33	0.28
Great Central-2	0.33	0.34	0.24	0.30	0.30	0.25	0.34		0.40	0.30
Henderson	0.43	0.47	0.40	0.53	0.47	0.46	0.51			0.47
Hobiton	0.57	0.48	0.50	0.64	0.65	0.71	0.67			0.60
Ian-1		1.01	0.71	0.83	1.08	1.32	1.28			1.00
Ian-2		1.06	1.09	1.21	1.42	1.76	2.09			1.39
Kennedy-1	0.45	0.46	0.45	0.53	0.48	0.50	0.57			0.49
Kennedy-2	0.57	0.55	0.48	0.48	0.41	0.50	0.52			0.50
Kitlope						0.68				
Long-1	0.58	0.53	0.64	0.66	0.58	0.72	1.08			0.63
Long-2	0.62	0.61	0.67	0.61	0.62	0.71	0.62			0.64
Muriel-1		0.73			0.77	0.81	0.92			0.78
Muriel-2		0.81								
Nimpkish-1	0.54	0.43	0.40	0.43	0.45	0.62	0.40			0.46
Nimpkish-2	0.69	0.41	0.37	0.41	0.42	0.52	0.43			0.44
Sproat-1	0.28	0.23	0.22	0.25	0.26	0.21		0.25	0.28	0.24
Sproat-2	0.27	0.21	0.11	0.22	0.23	0.21		0.24	0.24	0.21
Yakoun		0.58	0.60	0.68	1.01	0.75	0.85			0.74

Table 12. Variation in mean epilimnetic pH during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		6.1	6.1						
Curtis		6.3	6.3						
Kennedy-1	6.9	7.0	6.8	7.0	6.9	6.8	6.5		6.9
Kennedy-2	6.7	6.6	6.6	7.0	7.0	6.6	6.4		6.7
Sproat-1	7.4	7.0	7.0	7.2	7.3	7.0		6.8	7.0
Sproat-2	7.4	7.0	7.1	7.5	7.3	7.1		6.6	7.1

Table 13. Variation in mean epilimnetic total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		1.12	1.38						
Curtis		1.45	1.99						
Kennedy-1	12.04	13.24	13.17	15.72	14.10	14.35	13.27		13.85
Kennedy-2	8.66	8.84	11.51	10.74	10.71	11.90	10.93		10.54
Sproat-1	21.74	22.24	19.40	23.24	23.34	23.00		22.60	22.50
Sproat-2	22.60	23.02	23.20	24.18	23.34	22.75		23.17	23.24

Table 14. Variation in mean epilimnetic DIC ($mg \cdot L^{-1}$) determined using a gas chromatograph during the 1983 study.

Lake and station	May	Jun	Jul	Aug	Sep	Oct	$\bar{x}$
Bonilla	1.34	1.09	1.21	0.61	0.66	1.81	1.04
Curtis	0.96	1.26	0.98	0.39	1.12	1.73	1.02

Table 15. Variation in mean epilimnetic DIC ($mg \cdot L^{-1}$) determined using the potentiometric method (APHA 1976) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		0.80	0.93						
Curtis		0.84	1.09						
Kennedy-1	3.94	4.08	4.39	4.77	4.45	4.79	5.78		4.54
Kennedy-2	3.28	3.38	4.36	3.27	3.25	4.42	5.28		3.82
Sproat-1	5.87	6.71	5.84	6.41	6.31	7.02		7.87	6.84
Sproat-2	6.04	6.98	6.90	6.23	6.56	6.60		9.13	6.84

Table 16. Variation in mean epilimnetic total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		251	269	194	527	392	333			332
Bonilla		250	220	298	504	265	251			308
Curtis		172	268	462	513	266	301			349
Eden		246	269	265	470	251	321			308
Great Central-1	343	220	160	161	117	272	104		303	192
Great Central-2	464	175	268	185	130	333	131		270	231
Henderson	426	291	162	187	196	231	142			228
Hobiton	260	318	214	249	203	276	166			246
Ian-1		193	234	378	323	358	321			308
Ian-2		244	270	363	449	300	295			330
Kennedy-1	300	260	212	228	190	251	116			225
Kennedy-2	300	290	238	189	188	171	141			217
Kitlope						259				
Long-1	292	215	210	152	211	174	148			197
Long-2	273	218	181	216	234	216	183			216
Muriel-1		163			271	297	194			234
Muriel-2		171								
Nimpkish-1	300	173	271	182	268	136	146			208
Nimpkish-2	293	258	190	171	259	143	131			206
Sproat-1	285	203	173	197	157	310		156	244	206
Sproat-2	270	203	170	179	195	485		180	233	248
Yakoun		164	194	222	379	259	259			252

Table 17. Variation in mean epilimnetic nitrate ($\mu g\ N \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		28	18	4	11	12	27			15
Bonilla		<1	3	4	1	3	<1			2
Curtis		<1	<1	<2	1	<1	8			2
Eden		46	39	23	22	39	47			34
Great Central-1	13	3	<1	<1	<1	<1	<1		15	2
Great Central-2	18	4	<1	<1	<1	<1	1		16	3
Henderson	6	5	<1	<1	<1	<1	9			3
Hobiton	9	<1	<1	<1	<1	<1	2			2
Ian-1		29	26	24	23	27	28			26
Ian-2		35	35	28	23	30	31			29
Kennedy-1	40	8	<1	<1	<1	<1	12			7
Kennedy-2	17	3	<1	<1	<1	<1	10			4
Kitlope						12				
Long-1	60	28	<1	1	1	<1	20			13
Long-2	52	34	<1	1	1	<1	10			12
Muriel-1		<1			<1	<1	5			1
Muriel-2		<1								
Nimpkish-1	46	36	27	24	2	<1	15			20
Nimpkish-2	43	39	26	24	5	<1	6			20
Sproat-1	2	<1	<1	<1	<1	<1		2	9	1
Sproat-2	<1	<1	<1	<1	<1	<1		3	8	1
Yakoun		8	<1	2	<1	9	8			4

Table 18. Variation in mean epilimnetic total phosphorus ($\mu g\ P \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		2.0	1.7	4.0	5.7	5.0	4.7			3.9
Bonilla		2.0	2.0	6.7	10.0	6.0	6.7			5.8
Curtis		1.3	2.0	4.0	4.7	3.0	2.7			3.1
Eden		2.3	1.0	3.3	6.3	4.7	4.3			3.7
Great Central-1	<1.0	1.3	<1.0	1.5	2.0	1.3	1:3		1.0	1.4
Great Central-2	<1.0	1.3	1.3	2.0	2.3	1.7	1:0		1.5	1.6
Henderson	1.0	2.3	1.3	5.0	5.3	1.7	3.0			2.9
Hobiton	2.0	<1.0	3.0	3.0	5.0	5.0	2.7			3.2
Ian-1		2.7	<1.0	3.0	4.0	3.0	4.0			2.8
Ian-2		2.0	1.7	3.0	4.0	3.7	4.3			3.1
Kennedy-1	1.7	3.0	2.3	3.7	7.0	5.7	3.3			4.0
Kennedy-2	1.3	<1.0	<1.0	<1.0	2.0	1.3	1.0			1.2
Kitlope						4.7				
Long-1	6.7	1.3	3.3	5.0	3.7	3.0	4.7			3.7
Long-2	2.5	1.3	3.0	4.7	3.3	4.0	5.3			3.4
Muriel-1		1.3			3.7	2.7	2.0			2.6
Muriel-2		1.0								
Nimpkish-1	1.0	<1.0	1.0	2.0	2.3	1.7	1.3			1.5
Nimpkish-2	1.5	<1.0	<1.0	1.3	1.0	<1.0	1.0			1.1
Sproat-1	<1.0	2.0	<1.0	<1.0	1.7	1.0		<1.0	1.0	1.3
Sproat-2	<1.0	2.0	<1.0	<1.3	2.3	1.3		1.0	1.5	1.5
Yakoun		2.3	<1.0	4.7	7.7	4.0	3.0			4.0

Table 19. Variation in mean epilimnetic particulate phosphorus ($\mu g\ P \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun										
Bonilla		1.0	0.4		6.0	3.4	2.6			2.9
Curtis		1.0	0.6		3.2	1.5	0.5			1.6
Eden										
Great Central-1	0.6	0.9	0.8	1.5		1.9	1.1		0.9	1.3
Great Central-2	0.7	1.5	1.1	1.8		1.6	1.2		1.2	1.4
Henderson	1.0	1.6	1.1	2.4		2.6	1.8			1.9
Hobiton	1.6	2.3	2.2	1.9		3.5	2.0			2.4
Ian-1										
Ian-2										
Kennedy-1	1.2	2.2	2.1	2.2		5.1	2.0			2.8
Kennedy-2	1.2	1.1	0.9	0.7		1.2	1.1			1.0
Kitlope										
Long-1	1.2	1.6	3.1	1.9	4.8	2.1	2.6			2.5
Long-2	1.3	1.2	3.6	1.6	4.3	2.5	1.8			2.4
Muriel-1		2.4				1.8	1.7			2.0
Muriel-2		1.8								
Nimpkish-1	0.8	0.9	1.0	0.7	1.8	0.7	1.0			1.0
Nimpkish-2	0.8	0.8	0.8	0.7	1.1	0.5	0.9			0.8
Sproat-1	1.0	0.9	0.4	0.4		1.0		0.9	1.0	0.7
Sproat-2	1.1	0.9	0.7	0.6		0.9		1.3	1.4	0.8
Yakoun			0.2		1.9	0.9	0.5			1.0

Table 20. Variation in mean epilimnetic soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		1810	1943	1777	2007	1916	2060			1913
Bonilla		342	320	210	253	211	217			257
Curtis		303	283	320	477	328	316			343
Eden		2047	2155	2183	2267	2166	2417			2198
Great Central-1	770	671	343	667	320	513	247		520	504
Great Central-2	792	668	343	640	307	523	249		535	500
Henderson	350	285	80	183	73	250	104			186
Hobiton	1007	831	797	1427	660	867	492			886
Ian-1		1710	1700	1842	1837	1699	1890			1776
Ian-2		1567	1600	1690	1677	1575	1717			1637
Kennedy-1	543	458	193	520	267	563	282			403
Kennedy-2	480	450	350	710	380	637	331			487
Kitlope						395				
Long-1	898	777	497	537	517	444	541			586
Long-2	840	805	547	540	537	411	471			587
Muriel-1		890			955	1180	928			974
Muriel-2		933								
Nimpkish-1	1932	1606	1680	1602	1567	789	1065			1459
Nimpkish-2	1920	1655	1673	1632	1610	795	929			1465
Sproat-1	1203	1003	940	1513	867	997		752	830	1040
Sproat-2	993	1059	980	1597	867	1023		822	892	1068
Yakoun		837	777	787	687	657	777			746

Table 21. Variation in mean epilimnetic total dissolved solids ($mg \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		28.0	30.1	24.1	32.5	28.7	36.8			29.0
Bonilla		21.1	27.5	20.5	18.9	20.4	25.5			22.0
Curtis		15.9	20.5	8.8	15.6	12.9	21.4			15.0
Eden		32.6	38.8	29.3	35.3	32.7	36.9			34.0
Great Central-1	23.6	37.2	23.7	22.9	17.1	22.5	20.4			24.0
Great Central-2	24.7	21.2	17.9	22.0	21.3	22.3	19.6			21.0
Henderson	78.7	66.7	64.3	55.2	56.5	53.3	54.1			61.0
Hobiton	21.6	14.6	21.1	23.7	18.3	23.5	22.1			20.0
Ian-1		30.7	40.8	24.0	34.1	31.3	43.6			33.0
Ian-2		48.1	41.5	31.1	38.0	44.4	46.9			40.0
Kennedy-1	23.5	23.1	25.6	23.7	26.3	31.2	32.8			26.0
Kennedy-2	22.4	14.9	20.1	23.9	18.7	26.4	24.1			21.0
Kitlope						8.3				
Long-1	14.7	16.0	11.7	9.1	11.7	13.1	18.8			13.0
Long-2	13.6	11.7	13.5	9.2	8.7	15.3	18.3			13.0
Muriel-1		23.3			23.7	28.4	32.7			25.0
Muriel-2		22.0								
Nimpkish-1	24.3	21.3	20.0	18.7	22.0	25.9	21.6			22.0
Nimpkish-2	24.3	20.5	24.0	22.5	23.3	23.5	20.3			23.0
Sproat-1	32.3	32.5	34.3	30.4	28.0	35.6		32.9		32.0
Sproat-2	36.0	35.1	33.6	33.7	28.0	34.7		32.9		33.0
Yakoun		24.7	36.3	19.3	24.0	28.4	17.9			26.0

Table 22. Variation in mean epilimnetic bacterial numbers ($x10^6 \cdot mL^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		0.67	0.85	0.84	1.36	1.78	1.30			1.14
Bonilla		0.40	1.32	1.15	1.73	1.30	1.74			1.30
Curtis		0.90	1.38	1.61	0.93	0.97	0.98			1.17
Eden		0.84	0.86	0.80	0.94	1.55	0.72			0.97
Great Central-1	0.32	0.88	1.14	1.57	0.74	0.82	0.78		0.84	0.94
Great Central-2	0.78	0.91	1.13	1.06	0.92	0.76	0.79		0.75	0.92
Henderson	0.99	1.55	0.88	1.67	1.21	1.58	1.44			1.35
Hobiton	1.01	1.57	1.11	1.27	1.23	1.18	1.34			1.26
Ian-1		1.27	0.92	1.02	0.86	1.63	0.87			1.09
Ian-2		1.59	1.11	0.99	1.09	1.29	0.83			1.14
Kennedy-1	0.84	0.76	0.85	0.72	0.87	0.92	1.00			0.84
Kennedy-2	1.00	0.57	0.51	0.90	0.54	0.43	0.71			0.64
Kitlope						1.22				
Long-1	1.10	0.61	1.28	0.75	0.80	0.80	1.39			0.92
Long-2	1.39	0.55	0.96	0.68	0.63	0.87	1.23			0.84
Muriel-1		0.56			0.51	0.54	1.03			0.58
Muriel-2		0.86								
Nimpkish-1	0.83	0.88	0.79	0.92	0.80	0.66	0.78			0.81
Nimpkish-2	1.04	0.86	0.85	0.58	0.69	0.54	0.75			0.74
Sproat-1	0.53	0.71	0.41	0.47	0.38	0.53		0.81	0.98	0.56
Sproat-2	0.61	0.57	0.60	0.41	0.40	0.44		0.69	0.86	0.51
Yakoun		0.37	0.85	1.33	1.53	1.33	0.77			1.11

Table 23. Variation in mean epilimnetic total chlorophyll ($\mu g \cdot L^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun		1.41	1.98	1.44	1.22	1.11	0.78			1.38
Bonilla		3.31	3.99	4.54	5.39	4.42	3.37			4.33
Curtis		2.79	4.34	2.80	3.32	2.59	1.76			3.08
Eden		1.46	2.37	1.60	1.17	0.74	0.51			1.40
Great Central-1	0.67	1.49	0.87	1.66	0.60	0.57	0.91		1.07	1.00
Great Central-2	0.73	1.40	0.77	0.81	0.80	0.65	0.94		0.96	0.89
Henderson	1.19	2.02	1.81	3.82	3.67	2.68	1.61			2.53
Hobiton	1.69	2.41	2.03	1.34	3.36	2.90	1.97			2.30
Ian-1		1.17	1.97	1.26	1.03	0.80	0.56			1.20
Ian-2		0.72	1.13	1.02	1.04	0.68	0.34			0.89
Kennedy-1	1.05	5.01	5.01	4.41	4.23	2.67	2.08			3.79
Kennedy-2	0.68	1.67	1.34	0.87	0.83	0.99	0.85			1.08
Kitlope						1.20				
Long-1	0.49	4.26	4.33	3.45	4.76	3.45	2.27			3.55
Long-2	1.22	3.83	5.20	4.06	4.00	3.65	2.30			3.69
Muriel-1		0.98			0.90	0.87	1.04			0.93
Muriel-2		0.86								
Nimpkish-1	0.28	1.39	1.98	1.32	4.09	6.33	4.28			2.86
Nimpkish-2	0.26	1.24	1.47	1.05	3.61	5.49	7.51			2.79
Sproat-1	1.04	0.52	0.35	0.30	0.41	0.45		1.16	1.00	0.52
Sproat-2	0.66	0.39	0.34	0.39	0.39	0.51		1.30	1.44	0.49
Yakoun		2.36	4.85	3.41	2.59	2.50	3.62			3.28

Table 24. Variation in mean (1,3 and 5 m) total algal volume ($mm^3 \cdot m^{-3}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	x
Awun		319	654	1327	616	588	838			754
Bonilla		4198	3238	18694	9124	4846	3783			8053
Curtis		1517	1363	3808	3786	2318	1496			2558
Eden		199	1181	2283	440	457	421			947
Great Central-1	766	2366	2043	1440	369	1212	406		756	1323
Great Central-2	597	2393	2082	2276	268	1061	555		348	1427
Henderson	429	3647	6873	1351	4684	1554	1043			3085
Hobiton	269	3228	777	960	1204	3246	996			1681
Ian-1		221	361	302	208	189	222			239
Ian-2		123	275	460	232	136	168			252
Kennedy-1	541	12094	15228	9744	25152	4067	4910			11321
Kennedy-2	494	932	1323	1228	769	1106	835			998
Kitlope						886				
Long-1	115	2564	4700	2766	3443	2560	1464			2736
Long-2	343	2328	7258	3522	3217	2363	1445			3163
Muriel-1		751			725	708	590			716
Muriel-2		775								
Nimpkish-1	57	459	1614	4817	12307	27530	17804			9147
Nimpkish-2	61	368	1686	3847	9782	29504	21530			9244
Sproat-1	681	491	355	498	256	532		409	388	440
Sproat-2	913	395	401	416	192	350		393	428	398
Yakoun		1333	1912	9140	5656	1523	2692			4100

Table 25. Variation in mean (1,3 and 5 m) total algal carbon ($mg \cdot m^{-3}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	x
Awun		41	75	225	118	96	133			120
Bonilla		313	264	1532	861	586	412			724
Curtis		119	138	348	370	252	190			252
Eden		28	103	175	84	74	67			97
Great Central-1	62	162	157	130	53	119	63		91	113
Great Central-2	50	165	160	192	43	110	74		45	121
Henderson	39	258	511	185	355	173	93			253
Hobiton	29	250	86	131	163	369	119			178
Ian-1		29	48	38	31	28	33			35
Ian-2		18	40	51	32	20	26			33
Kennedy-1	51	809	1154	945	2761	414	386			1027
Kennedy-2	52	93	116	137	88	156	96			110
Kitlope						158				
Long-1	16	213	502	512	595	558	283			412
Long-2	51	205	746	557	636	493	296			456
Muriel-1		64			94	96	85			84
Muriel-2		64								
Nimpkish-1	8	45	127	366	726	1599	1061			558
Nimpkish-2	8	33	120	297	602	1801	1318			580
Sproat-1	65	49	44	57	33	59		64	44	52
Sproat-2	73	34	47	49	26	46		60	46	44
Yakoun		107	193	670	448	172	306			340

Table 26. Variation in mean euphotic zone primary production (>0.2 μm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		7.06	3.97	13.76	7.68	3.12	4.93		7.18
Curtis		3.75	1.98	2.19	1.16	2.28	1.77		2.11
Kennedy-1	0.27	2.56	1.31	3.76	4.66	1.44	2.91		2.53
Kennedy-2	0.76	1.17	0.69	0.67	0.59	0.72	1.08		0.80
Sproat-1	1.24	0.39	0.11	0.25	0.52	0.43		0.52	0.43
Sproat-2	0.32	0.08	0.28	0.33	0.94	0.14		0.86	0.39

Table 27. Variation in mean euphotic zone primary production (0.2-3.0 μm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		2.63	1.02	3.07	2.45	0.36	0.88		1.84
Curtis		1.68	0.61	1.17	0.52	1.06	1.04		0.94
Kennedy-1	0.09	0.98	0.51	2.54	3.25	0.50	0.54		1.33
Kennedy-2	0.39	0.47	0.22	0.31	0.30	0.28	0.58		0.35
Sproat-1	0.62	0.00	0.01	0.18	0.27	0.31		0.18	0.19
Sproat-2	0.13	0.00	0.19	0.23	0.38	0.00		0.51	0.17

Table 28. Variation in mean euphotic zone primary production (3.0-8.0 µm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		1.71	1.48	4.94	0.12	0.98	1.14		1.87
Curtis		0.86	0.65	0.46	0.22	0.40	0.29		0.48
Kennedy-1	0.08	0.51	0.23	0.48	0.70	0.49	1.06		0.49
Kennedy-2	0.21	0.27	0.22	0.21	0.10	0.25	0.11		0.20
Sproat-1	0.33	0.43	0.00	0.00	0.16	0.06		0.22	0.14
Sproat-2	0.14	0.00	0.01	0.00	0.37	0.07		0.09	0.10

Table 29. Variation in mean euphotic zone primary production (0.2-8.0 µm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		4.34	2.50	8.01	2.58	1.34	2.02		3.71
Curtis		2.54	1.26	1.63	0.74	1.47	1.33		1.42
Kennedy-1	0.18	1.48	0.74	3.02	3.95	0.99	1.60		1.82
Kennedy-2	0.60	0.74	0.45	0.52	0.40	0.53	0.69		0.55
Sproat-1	0.95	0.00	0.01	0.19	0.43	0.37		0.40	0.28
Sproat-2	0.26	0.00	0.20	0.03	0.75	0.08		0.60	0.25

Table 30. Variation in mean euphotic zone primary production (>3.0 µm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		4.43	2.95	10.69	5.22	2.76	4.05		5.33
Curtis		2.08	1.37	1.02	0.64	1.22	0.73		1.17
Kennedy-1	0.18	1.58	0.80	1.22	1.41	0.94	2.37		1.20
Kennedy-2	0.37	0.70	0.46	0.36	0.29	0.44	0.50		0.45
Sproat-1	0.62	0.62	0.10	0.07	0.25	0.12		0.34	0.25
Sproat-2	0.19	0.22	0.09	0.10	0.56	0.14		0.35	0.23

Table 31. Variation in mean euphotic zone primary production (>8.0 µm) (mg $C \cdot m^{-3} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		2.72	1.47	5.75	5.10	1.78	2.92		3.46
Curtis		1.21	0.72	0.56	0.42	0.81	0.44		0.68
Kennedy-1	0.09	1.08	0.57	0.74	0.71	0.45	1.31		0.71
Kennedy-2	0.16	0.43	0.24	0.15	0.19	0.19	0.39		0.25
Sproat-1	0.29	0.20	0.10	0.06	0.09	0.06		0.12	0.11
Sproat-2	0.06	0.31	0.08	0.30	0.19	0.07		0.26	0.17

Table 32. Variation in mean euphotic zone integrated hourly primary production (mg $C \cdot m^{-2} \cdot h^{-1}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		36.0	21.8	56.4	26.1	9.4	16.8		29.5
Curtis		27.4	14.6	11.6	6.5	11.2	8.9		12.9
Kennedy-1	2.6	23.6	12.6	36.1	41.0	12.1	20.4		22.6
Kennedy-2	5.9	9.1	6.3	6.0	5.9	6.2	9.7		6.9
Sproat-1	19.6	7.3	2.2	4.4	9.1	8.5		9.2	7.7
Sproat-2	5.2	1.6	7.4	6.5	16.8	3.1		15.4	7.5

Table 33. Variation in mean euphotic zone daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$) during the 1983 study.

Lake and station	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		218.2	463.1	263.8	60.6	125.7		258.1
Curtis		192.2	85.5	63.1	82.2	64.2		91.3
Kennedy-1	244.6	207.0	353.2	513.2	91.2	151.5		270.0
Kennedy-2	112.6	98.3	64.4	98.5	48.2	73.7		80.7
Sproat-1	79.9	17.9	67.0	81.1	66.7		105.9	65.0
Sproat-2	13.9	54.8	75.6	100.3	29.9		135.2	65.2

Table 34. Variation in mean euphotic zone primary production per unit of light (mg C·Einstein^{-1}) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	$\bar{x}$
Bonilla		6.12	9.62	11.13	11.60	3.31	10.47		8.85
Curtis		4.90	8.47	2.05	2.78	4.48	5.35		4.53
Kennedy-1	0.45	4.72	6.88	6.73	13.50	2.81	6.87		6.29
Kennedy-2	1.07	2.16	3.27	1.23	2.59	1.48	3.38		2.15
Sproat-1	3.69	1.61	0.77	1.19	1.99	2.21		13.87	2.62
Sproat-2	0.91	0.28	2.34	1.34	2.46	0.99		17.69	2.64

Table 35. Variation in volumetric zooplankton biomass (mg dry weight·m^{-3}) during the 1983 study.

Lake and station	Haul length (m)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun	(25)		6.6	21.3	47.7	71.8*	41.7	18.8			33.2
Bonilla	(25)		4.7	17.4	26.7	40.4	23.9	10.8			23.7
Curtis	(25)		2.8	3.7	3.5		8.0	4.2			4.8
Eden	(25)		9.5	6.6	5.7	24.6	17.4	21.2			13.3
Great Central-1	(50)	2.6	3.0	7.6	4.9	76.8*	28.2	17.8		6.3	11.9
Great Central-2	(50)	2.8	1.9	8.8	3.7	92.4*	12.3	16.7		8.3	7.6
Henderson	(50)	4.8	3.1	14.1	12.7	9.8	6.5	11.1			8.9
Hobiton	(50)	6.0	11.1	20.0	14.6	9.0	4.5	5.9			10.7
Ian-1	(25)		12.6	31.6	18.1	25.6	55.4	12.6			28.2
Ian-2	(25)		8.9	18.1	14.2	42.6	21.0	10.3			21.0
Kennedy-1	(50)	2.7	3.8	7.9	8.1	4.6	3.9	3.5			5.2
Kennedy-2	(50)	3.9	4.5	5.1	8.0	4.2	0.9	3.6			4.4
Kitlope	(25)						2.8				
Long-1	(50)	9.2	11.1	12.0	10.4	4.4	2.1	10.3			8.3
Long-2	(50)	5.0	7.2	3.3	1.3	4.4	5.8	7.5			4.6
Muriel-1	(25)		11.0			15.6	9.8	9.7			12.5
Muriel-2	(25)		9.1								
Nimpkish-1	(25)	2.1	4.2	8.0	20.2	85.7*	88.9*	5.5			10.1
Nimpkish-2	(25)	4.5	2.0	5.4	10.8	23.2	25.4	11.9			12.6
Sproat-1	(50)	3.2	4.1	8.0	7.9	4.9	12.6		7.9	2.8	7.1
Sproat-2	(50)	5.4	4.6	8.2	6.1	4.4	4.7		9.1	3.6	5.6
Yakoun	(25)		2.4	2.6	4.4	8.6	9.2	5.2			5.6

* values contaminated with high phytoplankton biomass were not used in calculating seasonal averages.

Table 36. Variation in zooplankton ash-free dry weight ($mg \cdot m^{-3}$) during the 1983 study.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	$\bar{x}$
Awun				45.8	66.9*	40.1	17.4			38.4
Bonilla				25.4	38.4	22.3	9.8			26.3
Curtis				3.3		7.0	3.2			5.1
Eden				5.3	23.4	16.7	19.5			17.2
Great Central-1			4.4	3.5	73.2*	19.6	15.6		4.7	11.6
Great Central-2			4.2	3.1	87.6*	9.1	14.2		6.6	7.3
Henderson			6.6	11.8	8.5	5.7	7.3			8.2
Hobiton			19.1	13.4	7.9	3.9	4.2			9.0
Ian-1				16.7	24.4	55.0	11.5			30.2
Ian-2				13.6	42.0	19.8	9.4			24.4
Kennedy-1			7.9	7.5	4.3	3.7	2.9			5.1
Kennedy-2				5.0	4.0	0.7	2.4			2.8
Kitlope						2.5				
Long-1			12.0	10.3	3.9	1.9	8.9			6.6
Long-2				1.1	4.2	5.3	6.0			4.4
Muriel-1					15.0	9.0	8.5			
Muriel-2										
Nimpkish-1			7.8	13.3	54.4*	46.4*	3.5			8.9
Nimpkish-2			5.3	6.5	12.8	14.4	7.1			10.0
Sproat-1			7.6	7.5	4.7	12.0		7.3	2.6	8.0
Sproat-2			8.2	5.6	4.3	4.3		8.4	3.3	6.3
Yakoun				4.1	8.2	8.5	4.9			7.0

*values contaminated with high phytoplankton biomass were not used in calculating seasonal averages.

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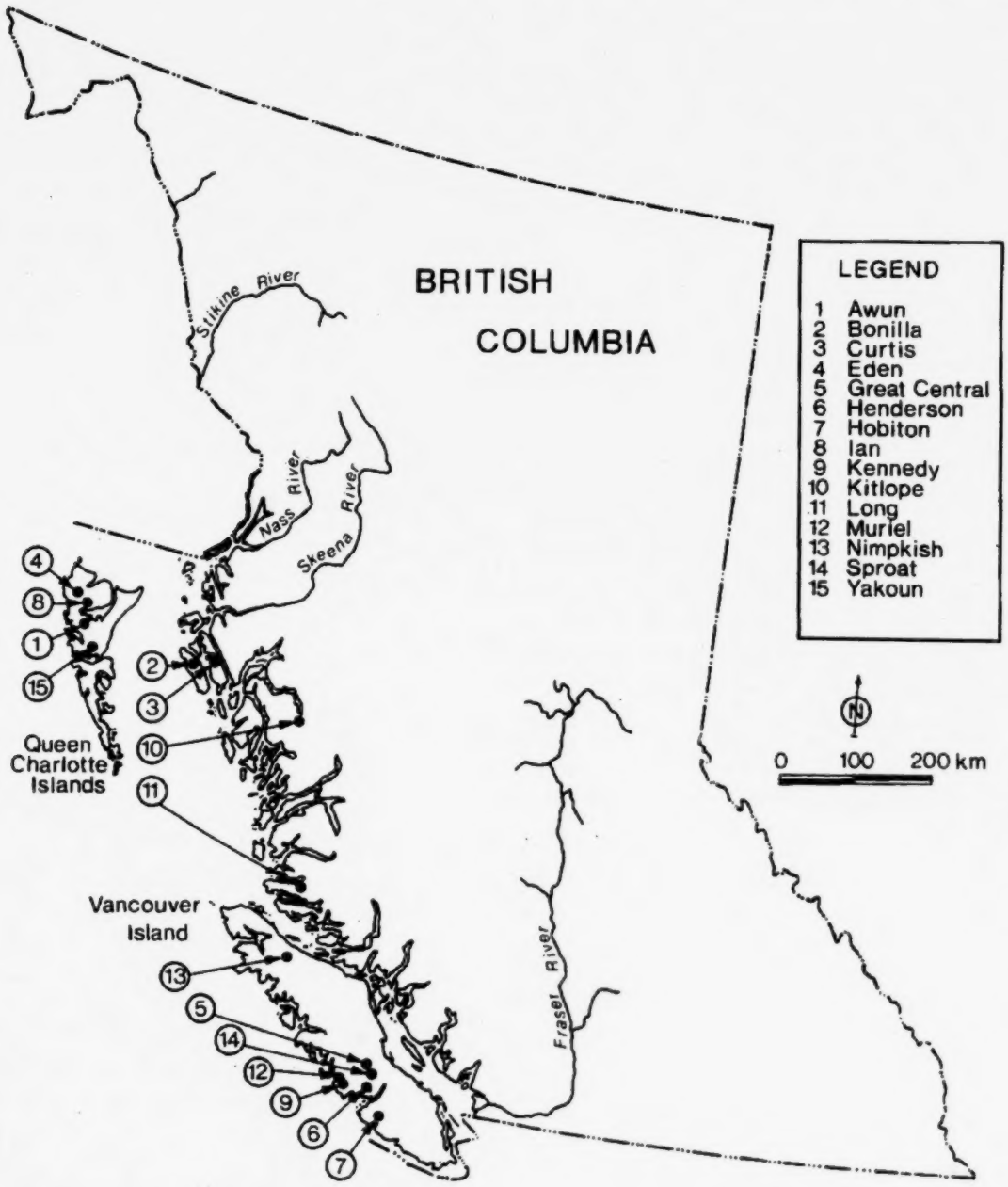


Fig. 1. Location of lakes studied in the 1983 program.

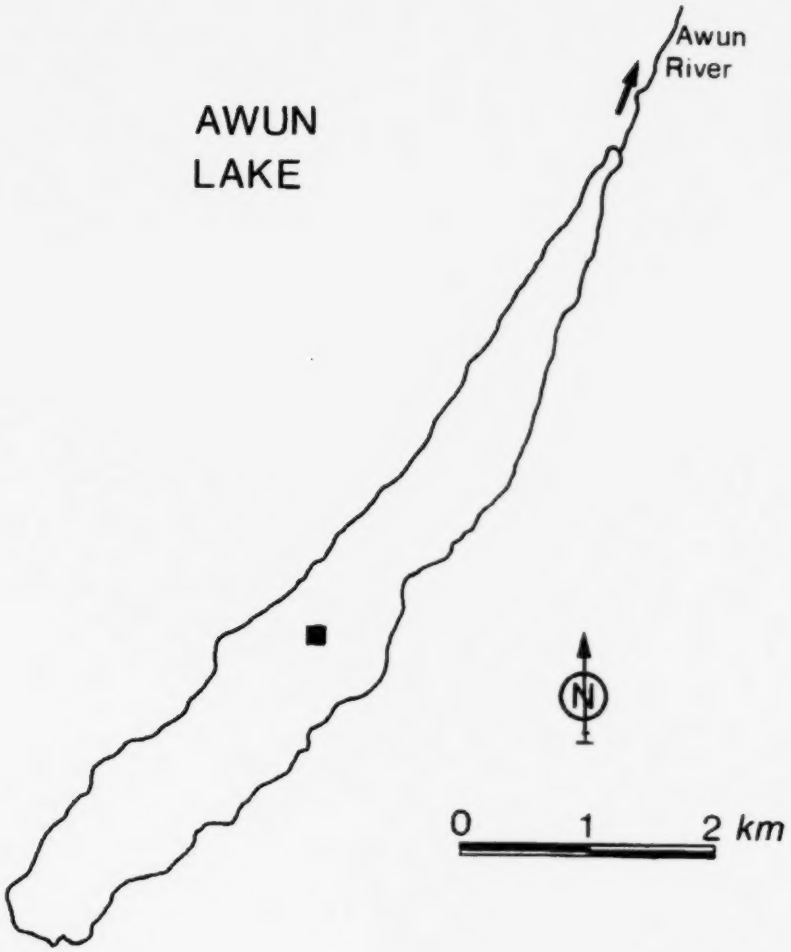


Fig. 2. Location of sampling station (■) at Awun Lake.

Fig. 3. Location of sampling station (■) at Bonilla Lake.

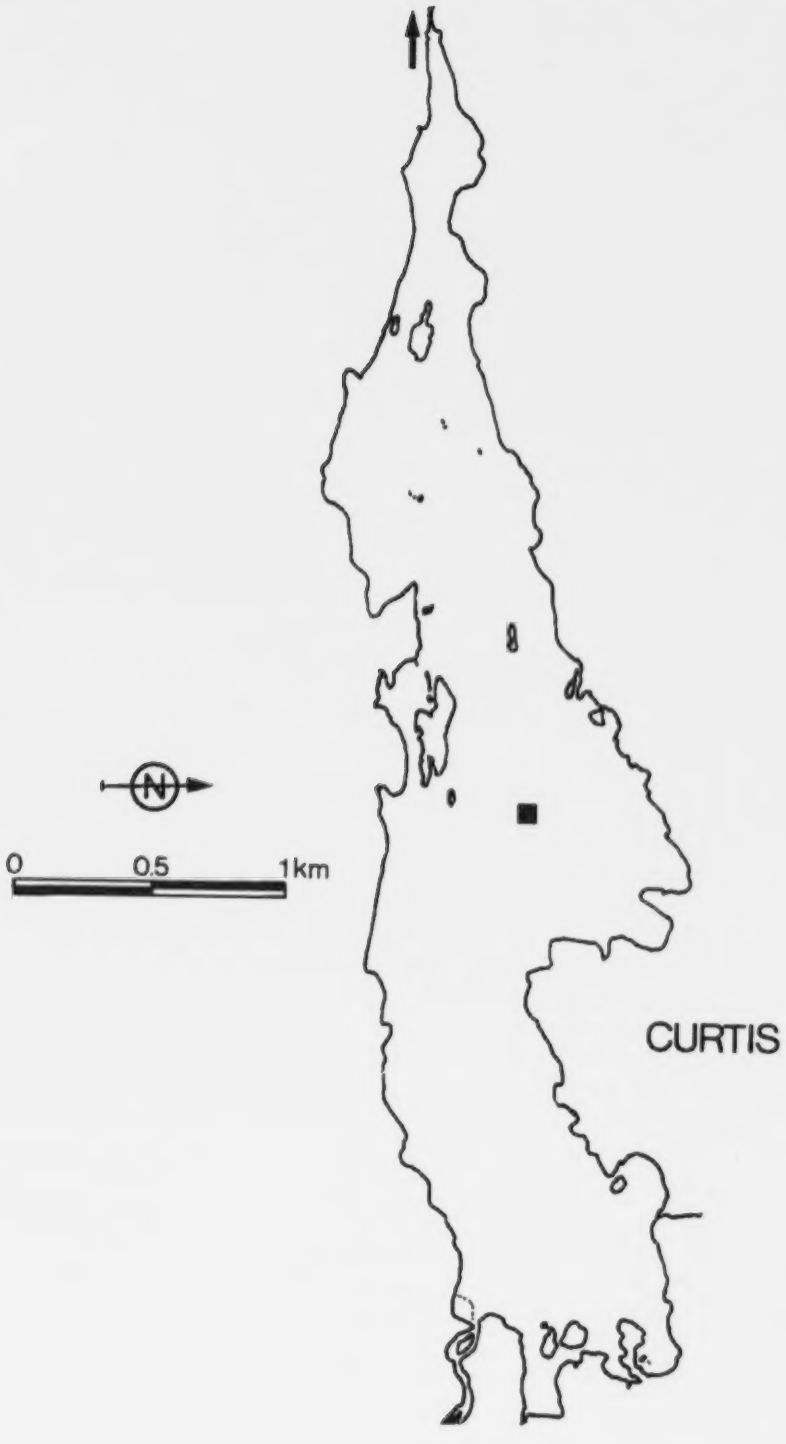


Fig. 4. Location of sampling station (■) at Curtis Lake.

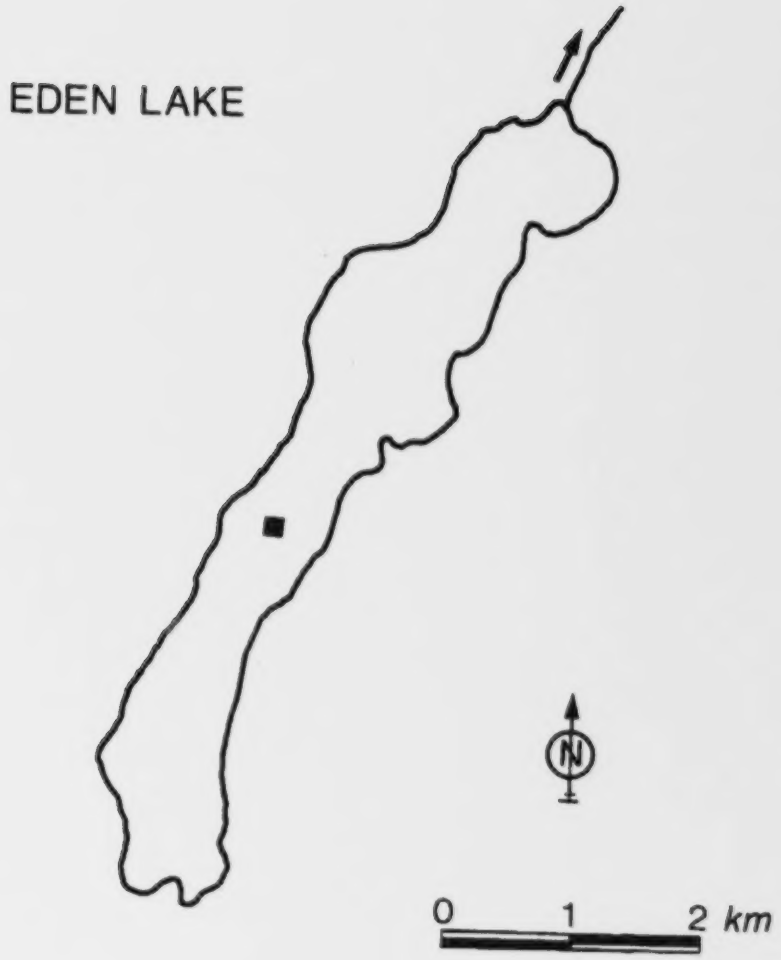


Fig. 5. Location of sampling station (■) at Eden Lake.

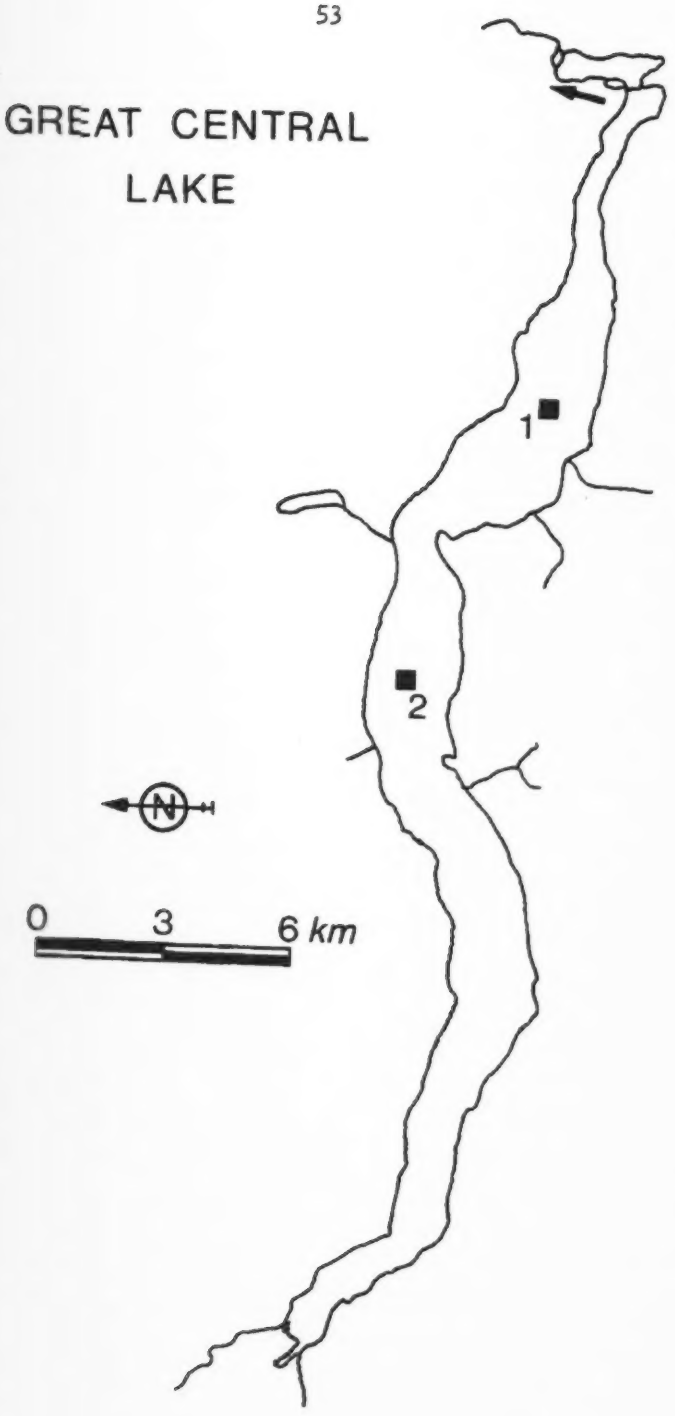


Fig. 6. Location of sampling stations (■) at Great Central Lake.

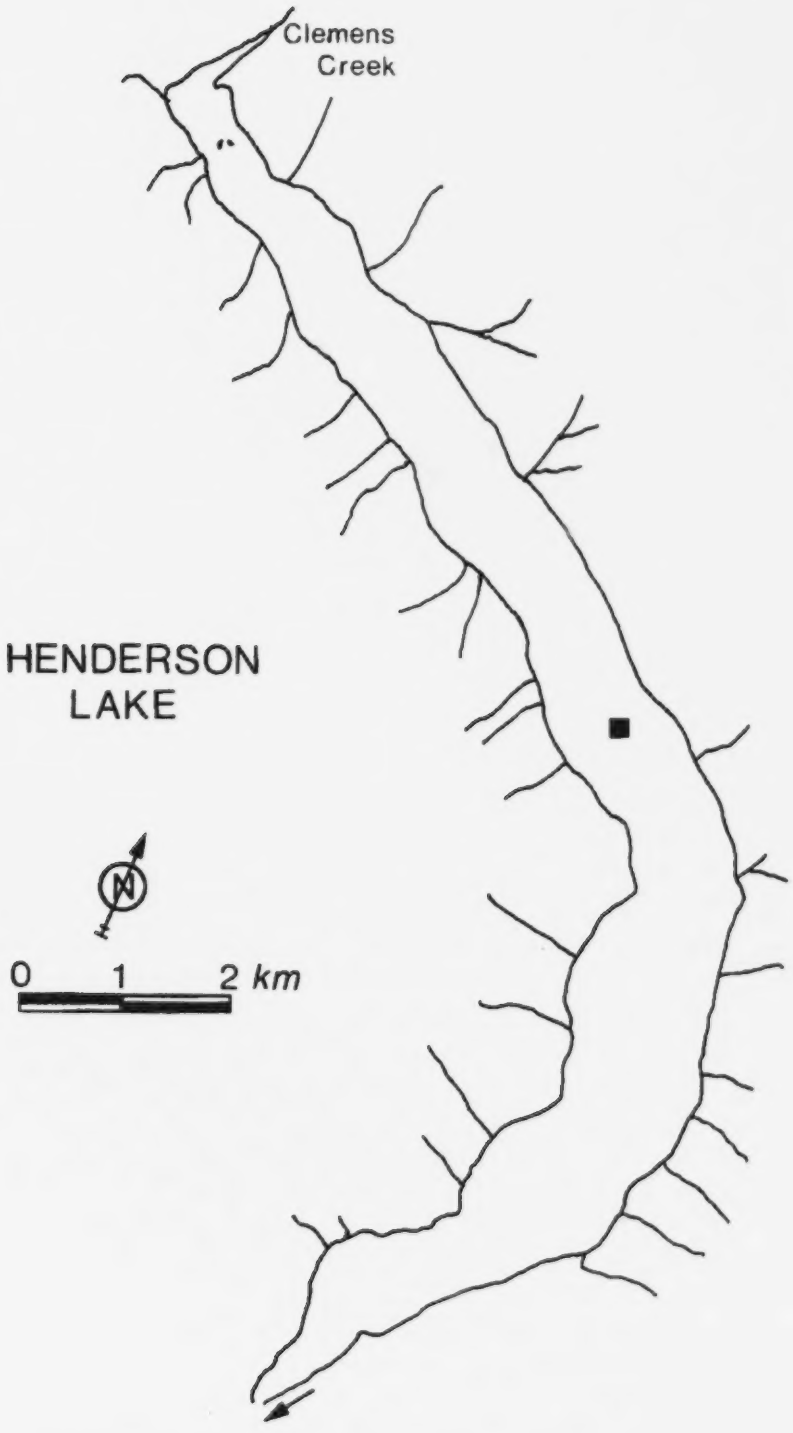


Fig. 7. Location of sampling station (■) at Henderson Lake.

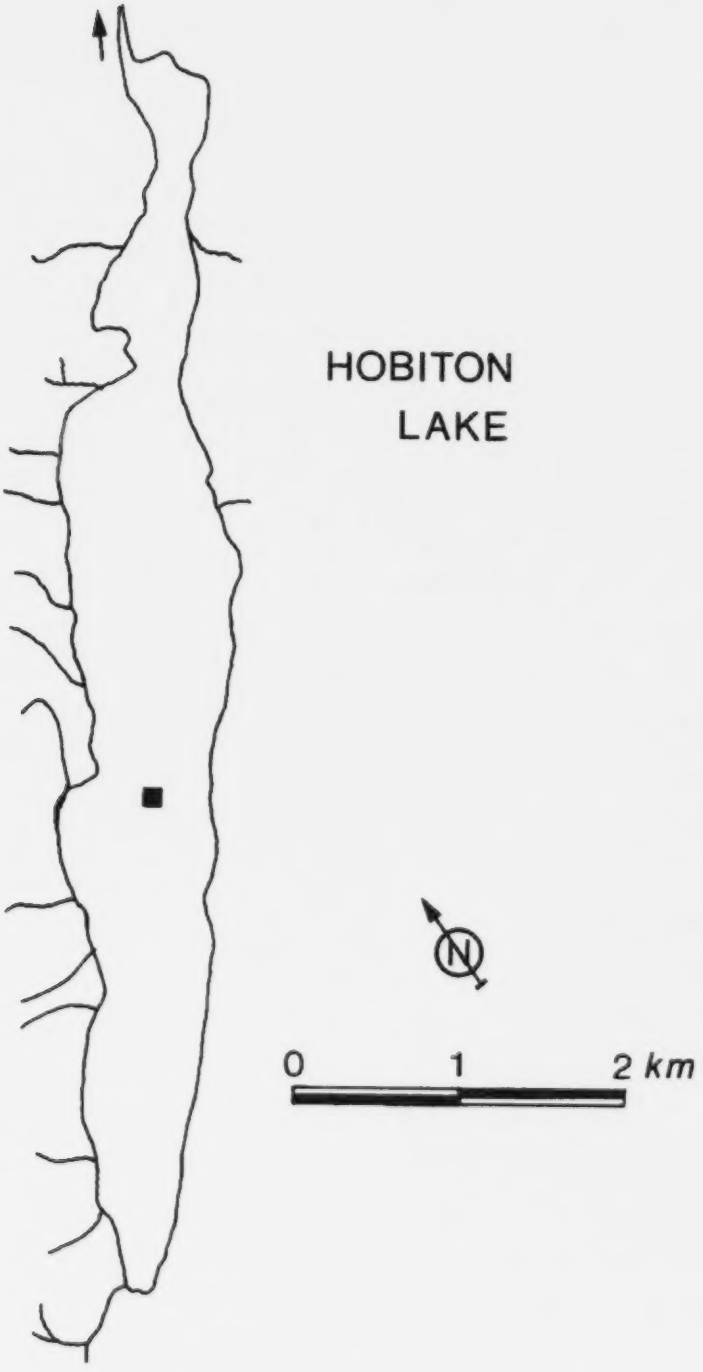


Fig. 8. Location of sampling station (■) at Hobiton Lake.

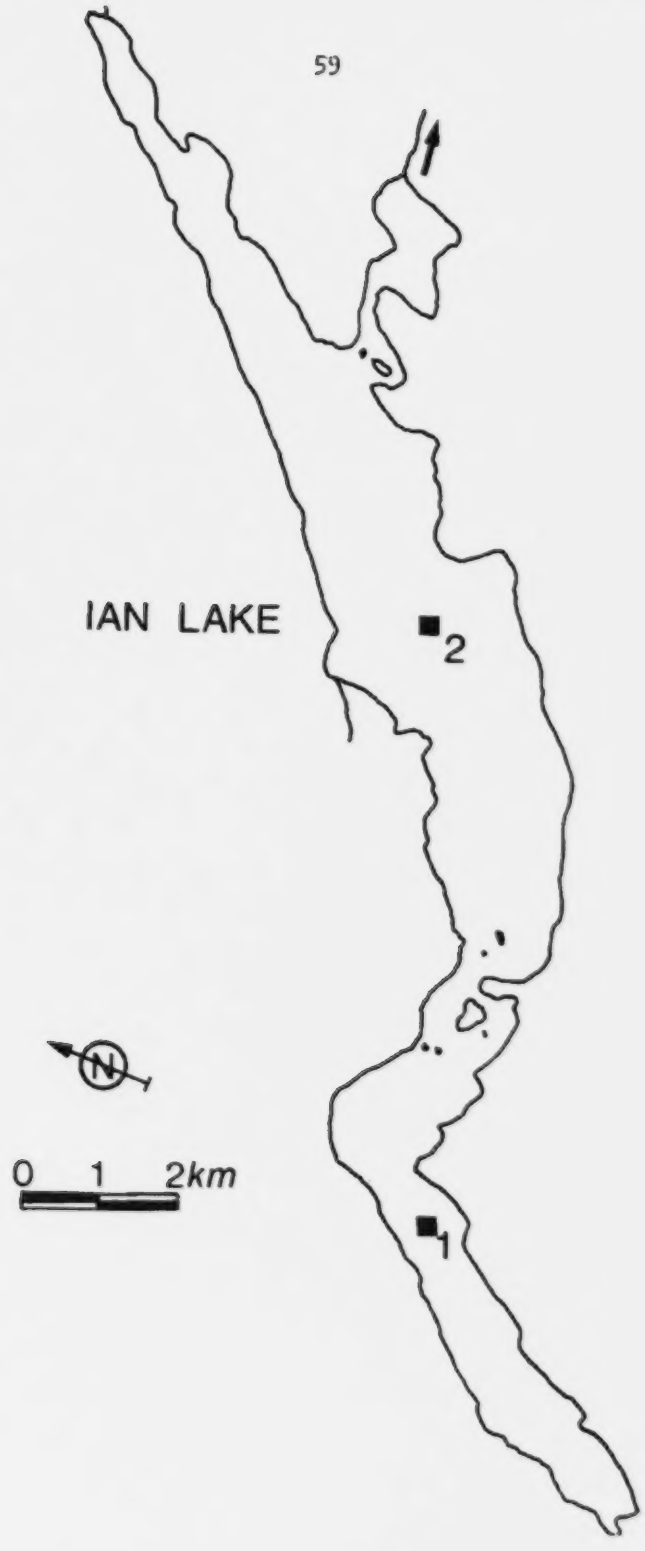


Fig. 9. Location of sampling stations (■) at Ian Lake.

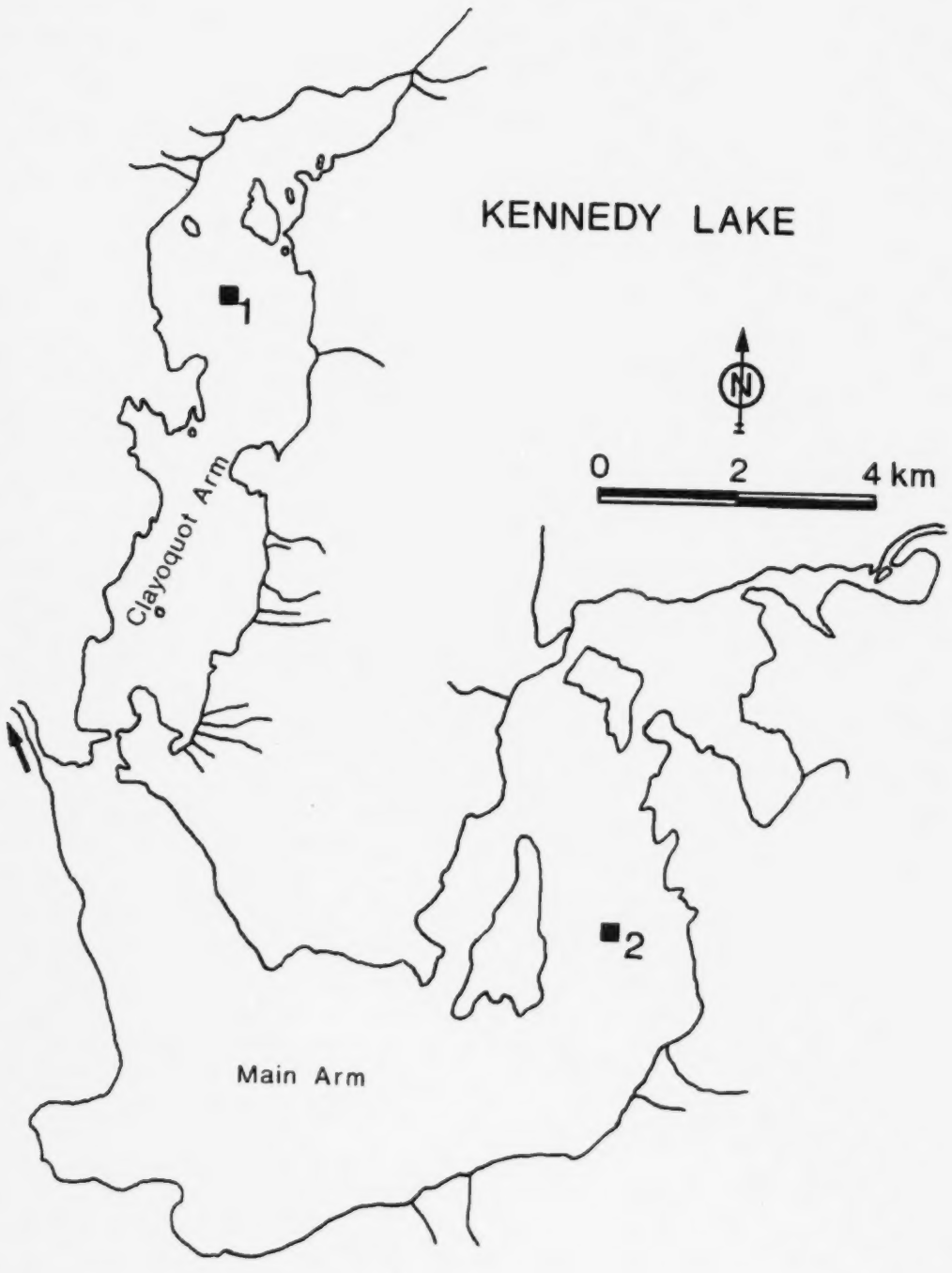


Fig. 10. Location of sampling stations (■) at Kennedy Lake.

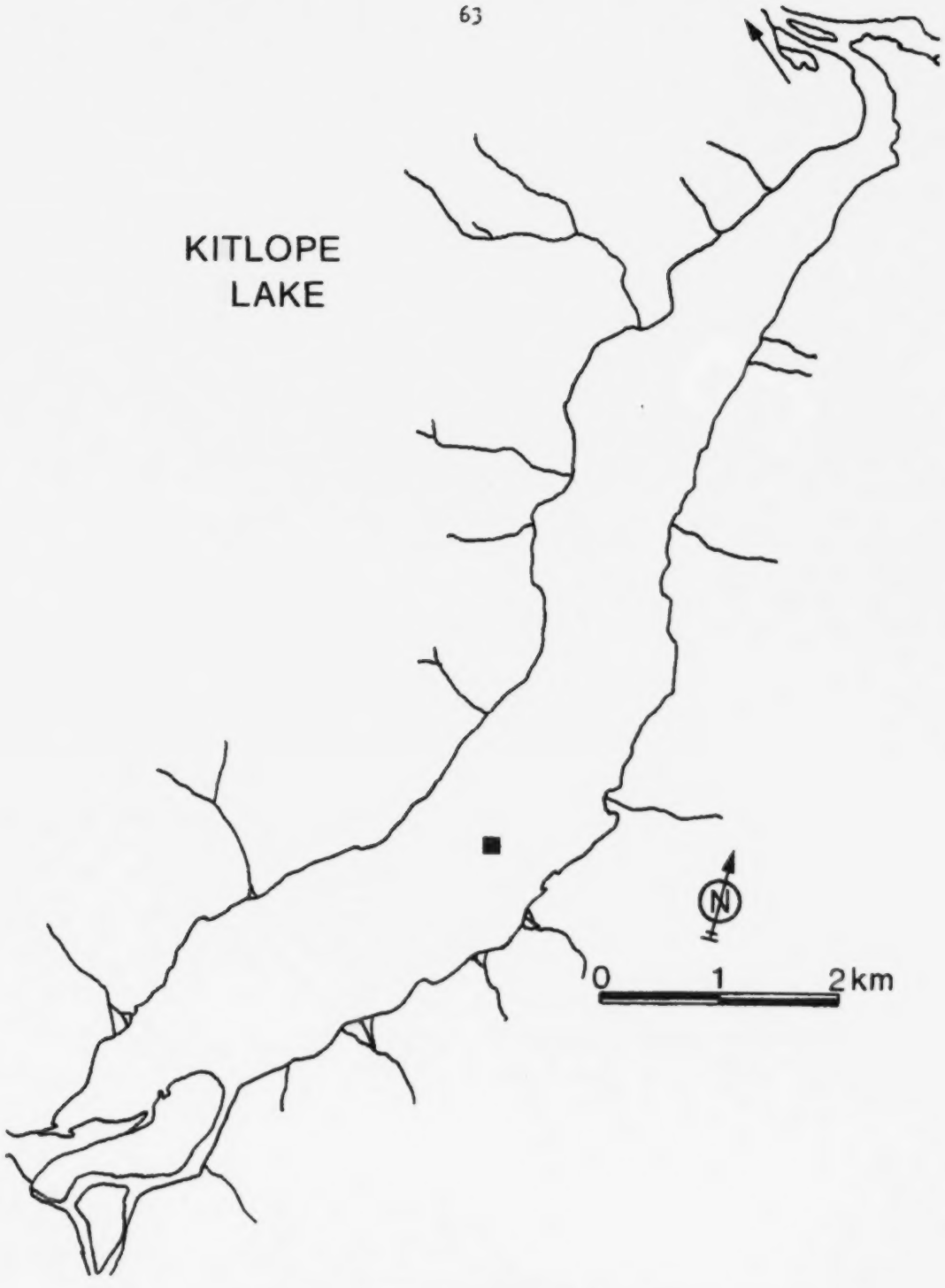


Fig. 11. Location of sampling station (■) at Kitlope Lake.

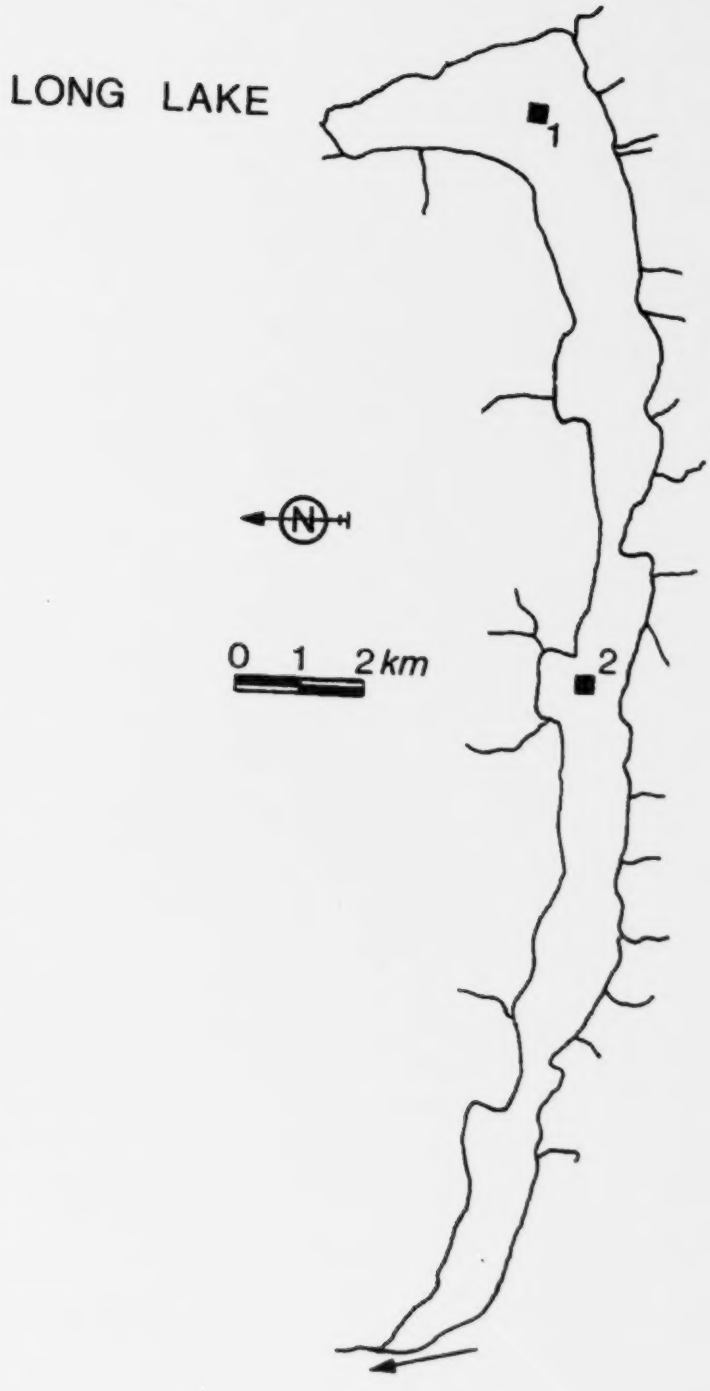


Fig. 12. Location of sampling stations (■) at Long Lake.

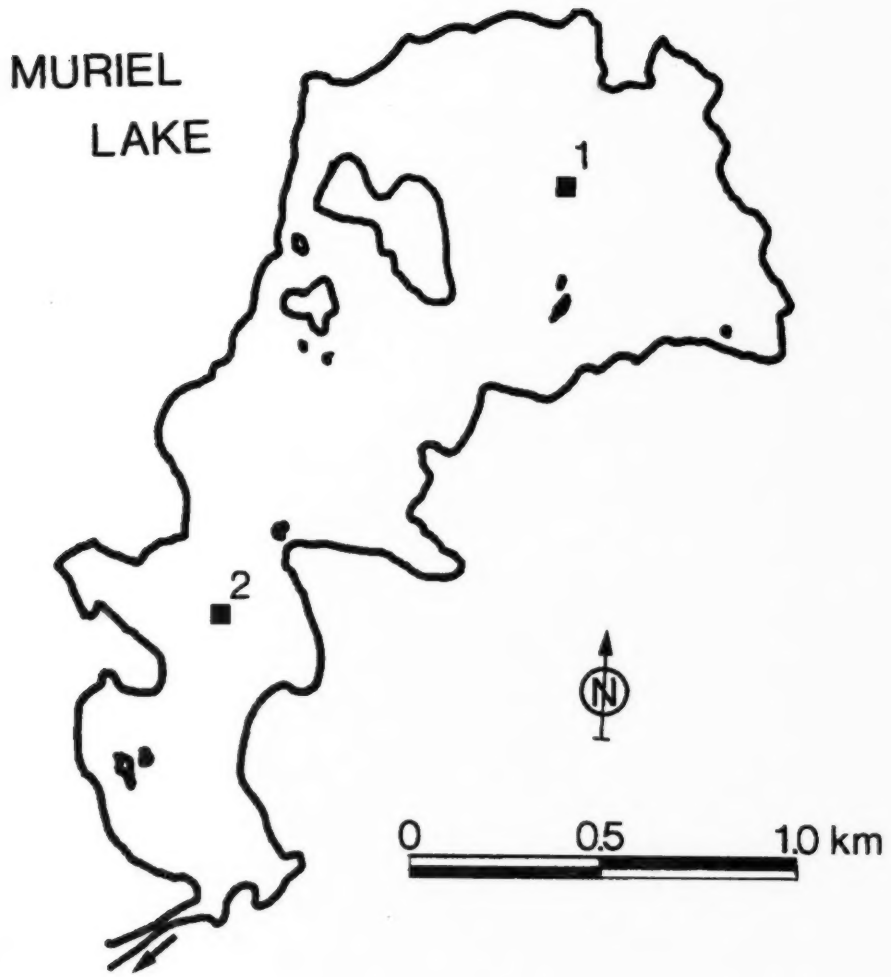


Fig. 13. Location of sampling stations (■) at Muriel Lake.

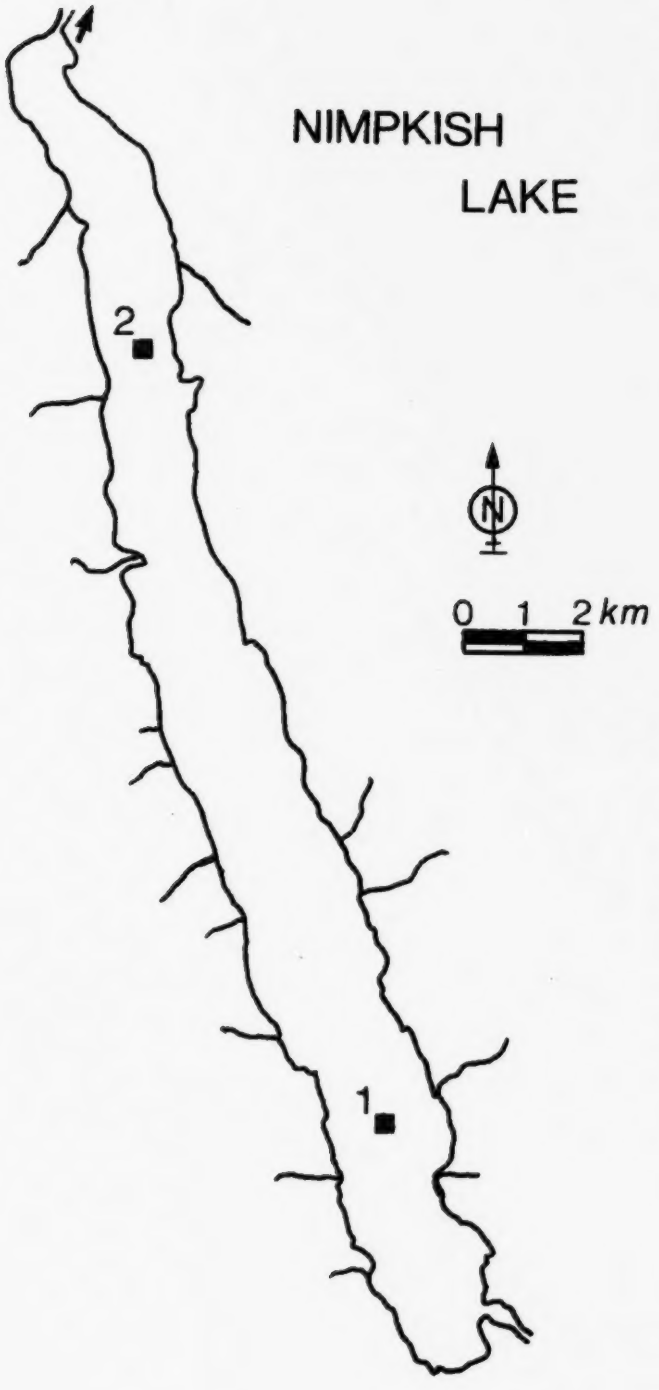
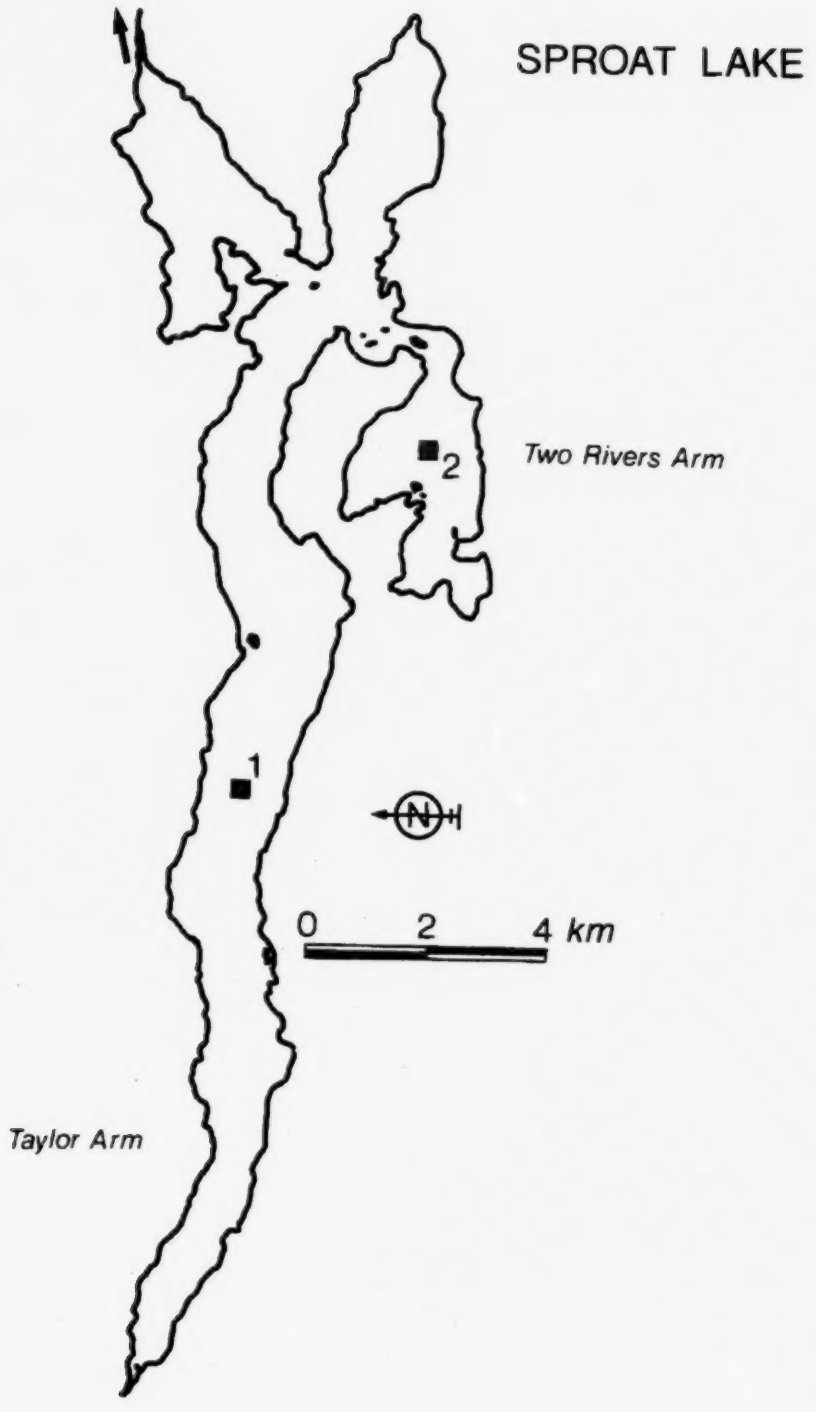


Fig. 14. Location of sampling stations (■) at Nimpkish Lake.



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Appendix Table 1. Physical, chemical and biological data from Awun Lake, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.5	10.7	10.3	4.9
Total dissolved solids ($mg \cdot L^{-1}$)		28.0		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	281	268	205	215
Nitrate ($\mu g\ N \cdot L^{-1}$)	29	27	28	43
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1830	1800	1800	1810
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.26	0.48	1.28	1.27
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.22	1.46	1.56	0.23
Total algal volume ($mm^{3} \cdot m^{-3}$)	266	326	364	76
Total algal carbon ($mg\ C \cdot m^{-3}$)	36	43	43	8

Appendix Table 2. Physical, chemical and biological data from Awun Lake, June 14, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.3	15.1	14.3	6.0
Total dissolved solids ($mg \cdot L^{-1}$)			30.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	274	251	283	245
Nitrate ($\mu g\ N \cdot L^{-1}$)	18	19	17	49
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	< 4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	<1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1950	1910	1970	1970
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.58	0.80	1.16	0.59
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.98	1.94	1.08	0.37
Total algal volume ($mm^{3} \cdot m^{-3}$)	646	700	616	142
Total algal carbon ($mg\ C \cdot m^{-3}$)	87	86	53	16

Appendix Table 3. Physical, chemical and biological data from Awun Lake, July 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.1	15.8	15.4	5.9
Total dissolved solids ($mg \cdot L^{-1}$)			24.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	174	191	216	227
Nitrate ($\mu g\ N \cdot L^{-1}$)	2	4	6	52
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	14
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	4	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1930	1910	1490	1890
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.94	0.82	0.76	0.93
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.53	1.47	1.33	0.34
Total algal volume ($mm^3 \cdot m^{-3}$)	1548	1332	1102	249
Total algal carbon ($mg\ C \cdot m^{-3}$)	281	224	172	25

Appendix Table 4. Physical, chemical and biological data from Awun Lake, August 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.0	16.5	16.0	6.0
Total dissolved solids ($mg \cdot L^{-1}$)			32.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	552	517	513	531
Nitrate ($\mu g\ N \cdot L^{-1}$)	19	7	7	46
Ammonia ($\mu g\ N \cdot L^{-1}$)	9	4	21	8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	6	6	5	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2000	2010	2010	1920
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.27	1.13	1.69	0.69
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.08	1.43	1.15	0.23
Total algal volume ($mm^{3} \cdot m^{-3}$)	565	641	642	117
Total algal carbon ($mg\ C \cdot m^{-3}$)	117	112	125	15

Appendix Table 5. Physical, chemical and biological data from Awun Lake, Sept. 13, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.9	14.7	14.4	5.7
Total dissolved solids ($mg \cdot L^{-1}$)			28.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	373	296	508	326
Nitrate ($\mu g\ N \cdot L^{-1}$)	12	12	11	58
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	6	32	7
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	5	5	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1903	1935	1911	1803
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.80	1.91	1.63	0.74
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.11	1.34	0.89	0.24
Total algal volume ($mm^{3} \cdot m^{-3}$)	758	497	509	125
Total algal carbon ($mg\ C \cdot m^{-3}$)	123	84	80	18

Appendix Table 6. Physical, chemical and biological data from Awun Lake, Oct. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.5	11.4	11.3	5.0
Total dissolved solids ($mg \cdot L^{-1}$)			36.8	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	420	292	287	246
Nitrate ($\mu g\ N \cdot L^{-1}$)	27	28	27	57
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	26	5	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	6	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2050	2070	2060	1920
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.32	1.34	1.25	0.57
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.12	0.58	0.65	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	1085	823	607	229
Total algal carbon ($mg\ C \cdot m^{-3}$)	162	134	103	34

Appendix Table 7. Physical, chemical and biological data from Bonilla Lake, May 11, 1983

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	13.2	13.0	12.8	12.5	12.1	10.2	8.7	6.8	5.9
Total dissolved solids ($mg \cdot L^{-1}$)					21.1				
pH			6.1			6.2			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			0.93			1.31			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			0.71			0.89			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[b]	2.96	3.36	3.50	3.92	3.92	4.00	4.12	3.24	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		331		211	209				231
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				10
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		2	2				2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1		1	1				1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		341		337	348				344
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.42		0.29	0.48				0.81
Total chlorophyll ($\mu g \cdot L^{-1}$)		3.05		3.57	3.30				0.36
Total algal volume ($mm^3 \cdot m^{-3}$)		3912		4797	3885				246
Total algal carbon ($mg\ C \cdot m^{-3}$)		288		357	293				20
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	6.56	9.59	8.38	7.43	1.57	0.00	0.02	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.88	3.91	2.82	3.08	0.50	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	3.68	5.68	5.56	4.35	1.07	0.00	0.11	0.06	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	4.48	6.37	5.19	4.42	1.10	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.60	2.46	2.37	1.34	0.60	0.00	0.00	0.03	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.08	3.22	3.19	3.01	0.47	0.00	0.21	0.03	

[a]values determined using the potentiometric method (APHA 1976).
[b]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 8. Physical, chemical and biological data from Bonilla Lake, June 15, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.4	14.3	14.3	14.2	14.1	13.8	11.9	7.7	6.6
Total dissolved solids ($mg \cdot L^{-1}$)					27.5				
pH			6.2			6.1			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			1.72			1.03			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)a			1.12			0.74			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)b	1.20	1.19	2.12	0.55	0.81	0.62	1.12	0.91	
Total dissolved nitrogen ($\mu g \ N \cdot L^{-1}$)		257		269	188				285
Nitrate ($\mu g \ N \cdot L^{-1}$)		2		3	3				12
Total phosphorus ($\mu g \ P \cdot L^{-1}$)		2		2	2				<1
Particulate phosphorus ($\mu g \ P \cdot L^{-1}$)		0.5		0.5	0.2				<0.2
Soluble reactive silicon ($\mu g \ Si \cdot L^{-1}$)		340		310	310				310
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.18		1.05	1.73				1.04
Total chlorophyll ($\mu g \cdot L^{-1}$)		3.60		4.51	3.86				0.27
Total algal volume ($mm^3 \cdot m^{-3}$)		3470		3143	3100				138
Total algal carbon ($mg \ C \cdot m^{-3}$)		282		254	255				15
Total prim. prod. (>0.2 μm) ($mg \ C \cdot m^{-3} \cdot h^{-1}$)	9.70	6.87	7.83	1.01	0.27	0.00	0.04	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg \ C \cdot m^{-3} \cdot h^{-1}$)	2.84	1.46	2.07	0.34	0.07	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg \ C \cdot m^{-3} \cdot h^{-1}$)	6.86	5.41	5.76	0.67	0.20	0.00	0.04	0.02	
Fract. prim. prod. (0.2-8.0 μm) ($mg \ C \cdot m-3 \cdot h^{-1}$)	6.02	4.44	5.09	0.72	0.16	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg \ C \cdot m-3 \cdot h^{-1}$)	3.18	2.98	3.02	0.38	0.09	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg \ C \cdot m^{-3} \cdot h^{-1}$)	3.68	2.43	2.74	0.29	0.11	0.00	0.08	0.02	

[a]values determined using the potentiometric method (APHA 1976).
[b]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 9. Physical, chemical and biological data from Bonilla Lake, July 13, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.9	14.8	14.6	14.5	14.2	13.7	12.6	9.1	6.7
Total dissolved solids ($mg \cdot L^{-1}$)					20.5				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	2.17	1.72	0.85	1.17	1.03	0.56	0.97	1.28	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		279		309	307				224
Nitrate ($\mu g\ N \cdot L^{-1}$)		9		2	2				9
Ammonia ($\mu g\ N \cdot L^{-1}$)		9		11	7				6
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		8		6	6				2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		60		260	310				340
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)		1.00		1.22	1.24				0.79
Total chlorophyll ($\mu g \cdot L^{-1}$)		5.51		4.19	3.92				0.34
Total algal volume ($mm^{3} \cdot m^{-3}$)		23112		16898	16071				341
Total algal carbon ($mg\ C \cdot m^{-3}$)		1901		1407	1289				36
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	34.00	22.77	8.79	4.45	0.48	0.00	0.03	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	7.98	5.24	2.17	0.67	0.14	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	26.02	17.53	6.62	3.78	0.34	0.00	0.05	0.02	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	18.80	13.16	5.96	2.54	0.40	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	10.82	7.92	3.79	1.87	0.26	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	15.20	9.61	2.83	1.91	0.08	0.00	0.10	0.04	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 10. Physical, chemical and biological data from Bonilla Lake, Aug. 18, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	17.6	17.5	17.3	17.2	16.0	14.3	12.8	8.3	6.7
Total dissolved solids ($mg \cdot L^{-1}$)					18.9				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	0.62	0.80	0.85	0.18	0.33	0.61	0.88	1.18	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		478		640	393				389
Nitrate ($\mu g\ N \cdot L^{-1}$)		1		1	1				8
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		11	5				8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		12		9	9				2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		7.0		6.0	5.0				1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		290		240	230				330
Bacteria numbers ($X10^6 \cdot mL^{-1}$)		1.92		1.55	1.73				0.68
Total chlorophyll ($\mu g \cdot L^{-1}$)		6.23		5.08	4.87				0.49
Total algal volume ($mm^3 \cdot m^{-3}$)		11779		7691	7902				325
Total algal carbon ($mg\ C \cdot m^{-3}$)		1114		747	723				37
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	15.27	12.51	4.86	0.28	0.18	0.00	0.04	0.06	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.86	4.71	1.88	0.06	0.08	0.00	0.00	0.04	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	12.41	7.80	2.98	0.22	0.10	0.00	0.04	0.02	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.58	6.03	2.45	0.08	0.06	0.00	0.00	0.03	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	1.32	0.57	0.02	0.00	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	13.69	6.48	2.41	0.20	0.12	0.00	0.25	0.03	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 11. Physical, chemical and biological data from Bonilla Lake, Sept. 14, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	13.8	13.7	13.6	13.6	13.4	13.2	13.0	9.9	5.9
Total dissolved solids ($mg \cdot L^{-1}$)					20.4				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	0.40	0.72	0.66	0.46	0.49	1.48	0.43	0.65	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		270		226	300				234
Nitrate ($\mu g\ N \cdot L^{-1}$)		4		2	3				12
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		8	11				9
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		6		6	6				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		3.7		3.2	3.2				1.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		219		207	207				219
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.45		0.77	1.67				0.58
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.67		4.61	3.99				0.32
Total algal volume ($mm^3 \cdot m^{-3}$)		6145		3732	4662				333
Total algal carbon ($mg\ C \cdot m^{-3}$)		728		475	554				40
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	4.26	5.12	1.53	0.29	0.00	0.00	0.04	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.94	1.29	0.16	0.07	0.00	0.00	0.03	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	3.32	3.83	1.37	0.22	0.24	0.04	0.01	0.16	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	1.82	2.33	1.07	0.21	0.00	0.00	0.02	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	0.88	1.04	0.91	0.14	0.00	0.00	0.00	0.12	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.44	2.79	0.46	0.08	0.25	0.03	0.02	0.02	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 12. Physical, chemical and biological data from Bonilla Lake, Oct. 13, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	11.4	11.4	11.3	11.3	11.3	11.2	11.1	10.8	5.8
Total dissolved solids ($mg \cdot L^{-1}$)					25.5				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	1.88	1.70	1.65	1.71	1.70	1.82	1.97	2.04	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		211		237	306				252
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				16
Ammonia ($\mu g\ N \cdot L^{-1}$)		11		4	5				12
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		11		5	4				4
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		2.5		2.4	2.8				1.3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		240		210	200				240
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		1.51		2.10	1.61				0.62
Total chlorophyll ($\mu g \cdot L^{-1}$)		3.05		3.80	3.26				0.20
Total algal volume ($mm^3 \cdot m^{-3}$)		3452		4069	3828				363
Total algal carbon ($mg\ C \cdot m^{-3}$)		377		453	408				41
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	12.88	6.87	2.40	0.60	0.00	0.00	0.04	0.00	0.00
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.16	1.37	0.42	0.11	0.00	0.00	0.00	0.00	0.00
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	10.72	5.50	1.98	0.49	0.00	0.00	0.05	0.00	0.00
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	5.15	2.80	1.02	0.21	0.00	0.00	0.04	0.00	0.00
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.99	1.43	0.60	0.10	0.00	0.00	0.05	0.00	0.00
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	7.73	4.07	1.38	0.39	0.00	0.00	0.00	0.00	0.00

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 13. Physical, chemical and biological data from Curtis Lake, May 11, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.8	13.7	13.0	12.6	11.8	7.9	6.2	5.1	4.7
Total dissolved solids ($mg \cdot L^{-1}$)					15.9				
pH			6.5			6.1			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			1.72			1.18			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			0.80			0.88			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[b]	2.08	2.68	2.50	2.55	3.24	3.64	1.58	1.80	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		166		161	190				180
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				22
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1		1	2				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0		1.0	1.0				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		330		290	290				298
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.94		0.91	0.86				1.16
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.95		2.77	3.64				0.29
Total algal volume ($mm^3 \cdot m^{-3}$)		1570		1532	1448				92
Total algal carbon ($mg\ C \cdot m^{-3}$)		121		118	117				10
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.41	3.35	2.91	4.35	5.00	1.02	0.02	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.89	1.64	1.07	1.59	2.58	0.48	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.52	1.71	1.84	2.76	2.42	0.54	0.04	0.09	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.23	2.19	1.90	3.00	3.50	0.76	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.34	0.55	0.83	1.41	0.92	0.28	0.00	0.04	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.18	1.16	1.01	1.35	1.50	0.26	0.11	0.05	

[a]values determined using the potentiometric method (APHA 1976).
[b]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 14. Physical, chemical and biological data from Curtis Lake, June 15, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.7	14.6	14.5	14.4	14.2	12.2	8.0	5.9	5.3
Total dissolved solids ($mg \cdot L^{-1}$)					20.5				
pH			6.3			6.3			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			2.11			1.87			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			1.13			1.05			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[b]	0.98	2.01	1.03	1.42	0.46	1.70	1.19	0.90	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		323		240	242				263
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				25
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		2	2				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.2		0.8	0.8				<0.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		310		270	270				770
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.22		1.58	1.33				1.28
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.10		4.50	4.43				0.24
Total algal volume ($mm^3 \cdot m^{-3}$)		1584		1405	1099				136
Total algal carbon ($mg\ C \cdot m^{-3}$)		163		144	108				18
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	5.21	6.20	2.29	2.14	0.11	0.00	0.01	0.02	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.14	1.35	0.85	0.88	0.01	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	3.07	4.85	1.44	1.26	0.10	0.00	0.02	0.03	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	3.30	4.16	1.45	1.35	0.06	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	1.16	2.81	0.60	0.47	0.00	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.91	2.04	0.84	0.79	0.05	0.00	0.03	0.03	

[a]values determined using the potentiometric method (APHA 1976).
[b]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 15. Physical, chemical and biological data from Curtis Lake, July 13, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	15.2	15.0	14.8	14.6	14.2	12.1	9.6	6.0	5.6
Total dissolved solids ($mg \cdot L^{-1}$)					8.8				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	0.63	1.40	1.13	0.75	0.99	0.94	0.01	0.70	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		540		506	340				342
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		5	<1				16
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	<4				4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		4		5	3				2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		350			290				280
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.81		1.51	1.52				1.09
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.99		3.42	3.00				0.36
Total algal volume ($mm^3 \cdot m^{-3}$)		4049		4180	3192				282
Total algal carbon ($mg\ C \cdot m^{-3}$)		372		391	280				32
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.01	4.18	3.47	1.39	0.34	0.03	1.28	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.97	2.29	1.88	0.74	0.19	0.00	1.28	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.04	1.89	1.59	0.65	0.15	0.03	0.00	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m\text{-}3 \cdot h^{-1}$)	1.26	2.80	3.18	1.15	0.20	0.00	1.28	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m\text{-}3 \cdot h^{-1}$)	0.29	0.51	1.30	0.41	0.05	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.75	1.38	0.29	0.24	0.14	0.10	0.00	0.00	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 16. Physical, chemical and biological data from Curtis Lake, Aug. 18, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	16.8	16.6	16.4	16.3	14.9	13.4	11.0	6.7	5.8
Total dissolved solids ($mg \cdot L^{-1}$)					15.6				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	0.60	0.82	0.16	0.17	0.17	0.03	0.78	0.12	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		592		596	352				498
Nitrate ($\mu g\ N \cdot L^{-1}$)		1		<1	1				20
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		4	<4				4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		5		5	4				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		4.0		4.0	1.7				0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		500		470	460				300
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.06		1.03	0.69				0.30
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.99		4.03	3.94				0.36
Total algal volume ($mm^3 \cdot m^{-3}$)		3338		4511	3509				130
Total algal carbon ($mg\ C \cdot m^{-3}$)		329		439	342				14
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.47	4.50	0.56	0.33	0.04	0.00	0.03	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.59	1.78	0.30	0.23	0.03	0.00	0.03	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.88	2.72	0.26	0.10	0.01	0.00	0.00	0.00	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.03	3.14	0.41	0.24	0.03	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.44	1.36	0.11	0.01	0.00	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.44	1.36	0.15	0.09	0.01	0.00	0.12	0.02	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 17. Physical, chemical and biological data from Curtis Lake, Sept. 14, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.4	13.9	13.8	13.7	13.4	13.1	12.2	6.0	5.2
Total dissolved solids ($mg \cdot L^{-1}$)					12.9				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	1.02	1.16	1.72	1.22	1.12	0.65	0.95	1.02	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		234		264	300				230
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				30
Ammonia ($\mu g\ N \cdot L^{-1}$)		21		20	24				15
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		4		3	2				4
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0		2.0	1.5				0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		323		323	339				199
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.79		1.03	1.08				0.44
Total chlorophyll ($\mu g \cdot L^{-1}$)		3.09		2.64	2.05				0.26
Total algal volume ($mm^3 \cdot m^{-3}$)		2738		2259	1957				89
Total algal carbon ($mg\ C \cdot m^{-3}$)		304		243	208				11
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.26	3.97	3.57	1.19	0.18	0.00	0.08	0.00	0.00
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.08	1.87	2.26	0.63	0.00	0.00	0.00	0.00	0.00
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.18	2.10	1.31	0.56	0.27	0.00	0.13	0.01	0.00
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.54	2.47	2.71	0.96	0.00	0.00	0.00	0.00	0.00
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.46	0.60	0.45	0.33	0.00	0.00	0.08	0.00	0.00
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.72	1.50	0.86	0.23	0.30	0.00	0.05	0.02	0.00

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 18. Physical, chemical and biological data from Curtis Lake, Oct. 13, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	10.6	10.6	10.5	10.5	10.4	10.2	10.1	9.2	4.9
Total dissolved solids ($mg \cdot L^{-1}$)					21.4				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	1.59	1.74	1.88	1.77	1.60	1.86	1.60	1.81	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		201		375	328				389
Nitrate ($\mu g\ N \cdot L^{-1}$)		8		8	8				32
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		5	4				9
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		3		3	2				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.4		0.4	0.6				0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		350		300	298				180
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.94		1.07	0.94				0.58
Total chlorophyll ($\mu g \cdot L^{-1}$)		2.17		1.79	1.31				0.16
Total algal volume ($mm^3 \cdot m^{-3}$)		1595		1589	1304				124
Total algal carbon ($mg\ C \cdot m^{-3}$)		206		192	172				17
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	4.36	3.24	1.81	0.83	0.06	0.00	0.00	0.07	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.44	1.93	1.00	0.47	0.06	0.00	0.00	0.06	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.92	1.31	0.81	0.36	0.00	0.00	0.00	0.01	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	3.41	2.57	1.39	0.70	0.06	0.00	0.00	0.07	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.97	0.64	0.39	0.23	0.00	0.00	0.00	0.01	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.95	0.67	0.42	0.13	0.00	0.00	0.00	0.00	

[a]values determined using the gas chromatograph (Stainton et al. 1977).

Appendix Table 19. Physical, chemical and biological data from Eden Lake, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.3	11.2	11.0	6.5
Total dissolved solids ($mg \cdot L^{-1}$)		32.6		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	255	232	250	243
Nitrate ($\mu g\ N \cdot L^{-1}$)	45	47	46	62
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2050	2040	2050	2060
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.71	0.76	1 .04	1.02
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.57	1 .44	1.36	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	178	214	204	52
Total algal carbon ($mg\ C \cdot m^{-3}$)	26	30	30	7

Appendix Table 20. Physical, chemical and biological data from Eden Lake, June 14, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.2	14.1	14.0	6.6
Total dissolved solids ($mg \cdot L^{-1}$)			38.8	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	274	251	283	245
Nitrate ($\mu g\ N \cdot L^{-1}$)	39	39	40	64
Ammonia ($\mu g\ N \cdot L^{-1}$)	< 4	< 4	< 4	< 4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	< 1	1	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2140	2150	2175	2220
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.70	0.91	0.96	1.02
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.01	3.31	1.78	0.34
Total algal volume ($mm^3 \cdot m^{-3}$)	1059	1327	1158	125
Total algal carbon ($mg\ C \cdot m^{-3}$)	98	117	94	14

Appendix Table 21. Physical, chemical and biological data from Eden Lake, July 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.2	15.1	15.0	5.9
Total dissolved solids ($mg \cdot L^{-1}$)			29.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	294	246	256	302
Nitrate ($\mu g\ N \cdot L^{-1}$)	22	24	24	67
Ammonia ($\mu g\ N \cdot L^{-1}$)	10	15	19	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	4	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2130	2210	2210	2270
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.75	0.78	0.87	0.96
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.65	1.65	1.54	0.23
Total algal volume ($mm^3 \cdot m^{-3}$)	2598	2055	2195	265
Total algal carbon ($mg\ C \cdot m^{-3}$)	199	158	166	28

Appendix Table 22. Physical, chemical and biological data from Eden Lake, Aug. 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.6	16.4	16.1	6.8
Total dissolved solids ($mg \cdot L^{-1}$)			35.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	510	361	540	499
Nitrate ($\mu g\ N \cdot L^{-1}$)	21	22		
Ammonia ($\mu g\ N \cdot L^{-1}$)	12	32	37	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	7	6	6	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2240	2280	2280	2220
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.16	0.86	0.80	0.46
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.18	1.26	1.08	0.25
Total algal volume ($mm^{3} \cdot m^{-3}$)	521	391	407	74
Total algal carbon ($mg\ C \cdot m^{-3}$)	104	72	74	7

Appendix Table 23. Physical, chemical and biological data from Eden Lake, Sept. 13, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.6	14.2	13.9	6.0
Total dissolved solids ($mg \cdot L^{-1}$)			32.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	243	243	268	289
Nitrate ($\mu g\ N \cdot L^{-1}$)	38	39	39	83
Ammonia ($\mu g\ N \cdot L^{-1}$)	6	5	7	17
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	6	4	4	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2126	2190	2182	2074
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.21	1.28	2.15	0.84
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.70	0.74	0.79	0.22
Total algal volume ($mm^3 \cdot m^{-3}$)	503	316	550	99
Total algal carbon ($mg\ C \cdot m^{-3}$)	82	54	84	15

Appendix Table 24. Physical, chemical and biological data from Eden Lake, Oct. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.6	11.5	11.4	5.9
Total dissolved solids ($mg \cdot L^{-1}$)			36.9	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	410	302	251	333
Nitrate ($\mu g\ N \cdot L^{-1}$)	47	47	46	79
Ammonia ($\mu g\ N \cdot L^{-1}$)	68	10	4	14
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	4	4	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	2320	2560	2370	2260
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.66	0.68	0.83	0.38
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.51	0.51	0.50	0.12
Total algal volume ($mm^{3} \cdot m^{-3}$)	404	389	469	138
Total algal carbon ($mg\ C \cdot m^{-3}$)	62	63	75	21

Appendix Table 25. Physical, chemical and biological data from Great Central Lake, Stn.1, April 16, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	9.2	7.2	6.0	5.2	4.6
Total dissolved solids ($mg \cdot L^{-1}$)			23.6		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	285	384	426	356	264
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	9	11	16	20
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	4	<4	8	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.5	0.5	0.8	0.5	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	680	830	810	700	830
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.20	0.19	0.57	0.89	0.58
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.37	0.88	1.00	0.72	0.40
Total algal volume ($mm^{3} \cdot m^{-3}$)	622	771	905	446	293
Total algal carbon ($mg\ C \cdot m^{-3}$)	49	62	74	36	26

Appendix Table 26. Physical, chemical and biological data from Great Central Lake, Stn.1, May 21, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	14.8	14.3	13.5	5.5	4.8
Total dissolved solids ($mg \cdot L^{-1}$)			37.2		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	200	239	221	197	171
Nitrate ($\mu g\ N \cdot L^{-1}$)	3	3	3	26	35
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	1.0	1.0	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	697	650	666	724	762
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.27	0.67	0.71	0.88	0.44
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.73	1.44	1.29	1.48	0.42
Total algal volume ($mm^3 \cdot m^{-3}$)	2241	2222	2634	889	325
Total algal carbon ($mg\ C \cdot m^{-3}$)	151	154	181	64	24

Appendix Table 27. Physical, chemical and biological data from Great Central Lake, Stn.1, June 24, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	16.2	16.1	15.8	5.4	4.9
Total dissolved solids ($mg \cdot L^{-1}$)			23.7		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	210	139	130	257	239
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	19	34
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	0.8	0.8	0.2	0.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	350	340	340	610	710
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.94	1.08	1.39	0.88	1.09
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.85	0.85	0.91	2.92	0.62
Total algal volume ($mm^3 \cdot m^{-3}$)	1894	1940	2296	1761	593
Total algal carbon ($mg\ C \cdot m^{-3}$)	154	143	173	133	42

Appendix Table 28. Physical, chemical and biological data from Great Central Lake, Stn.1, July 22, 1983

Depth (m)	1	3	5	23	40
Temperature (°C)	18.1	17.7	17.0	5.9	5.3
Total dissolved solids ($mg \cdot L^{-1}$)			22.9		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	142	148	193	212	230
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	29	43
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	5	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2	1	1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.5	1.6	1.3	1.0	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	640	690	670	1170	1250
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.60	1.49	1.61	1.37	1.17
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.62	0.74	0.61	0.63	1.48
Total algal volume ($mm^3 \cdot m^{-3}$)	1711	1297	1311	3722	744
Total algal carbon ($mg\ C \cdot m^{-3}$)	150	113	126	259	55

Appendix Table 29. Physical, chemical and biological data from Great Central Lake, Stn.1, Aug. 26, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	20.6	20.3	20.0	6.9	6.0
Total dissolved solids ($mg \cdot L^{-1}$)			17.1		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	137	116	99	152	189
Nitrate ($\mu g\ N \cdot L^{-1}$)	< 1	< 1	< 1	19	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	6	< 4	< 4	< 4	11
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	340	320	300	520	660
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.69	0.76	0.76	0.65	0.44
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.54	0.63	0.64	2.05	0.63
Total algal volume ($mm^3 \cdot m^{-3}$)	308	355	445	2937	474
Total algal carbon ($mg\ C \cdot m^{-3}$)	46	52	61	208	32

Appendix Table 30. Physical, chemical and biological data from Great Central Lake, Stn.1, Sept. 23, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	17.8	17.5	17.3	6.2	5.4
Total dissolved solids ($mg \cdot L^{-1}$)			22.5		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	253	364	199	231	219
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	7	46
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	5	5	30	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.4	2.0	2.2	1.2	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	500	520	520	740	900
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.82	0.82	0.82	0.77	0.47
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.48	0.62	0.62	1.17	0.58
Total algal volume ($mm^{3} \cdot m^{-3}$)	1522	1353	761	858	500
Total algal carbon ($mg\ C \cdot m^{-3}$)	144	132	82	74	34

Appendix Table 31. Physical, chemical and biological data from Great Central Lake, Stn.1, Oct. 28, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	13.9	13.8	13.6	6.7	5.7
Total dissolved solids ($mg \cdot L^{-1}$)			20.4		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	87	120		131	121
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	<1	<1	26	43
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	2	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	1.1	1.4	0.9	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	266	238	238	448	573
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.10	0.67	0.58	1.04	0.51
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.92	0.93	0.87	0.72	0.34
Total algal volume ($mm^3 \cdot m^{-3}$)	580	286	350	725	455
Total algal carbon ($mg\ C \cdot m^{-3}$)	85	50	54	61	31

Appendix Table 32. Physical, chemical and biological data from Great Central Lake, Stn.1, Dec. 6, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	6.5	6.4	6.4	6.1	4.7
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	216	210	301	486	292
Nitrate ($\mu g\ N \cdot L^{-1}$)	15	15	15	15	44
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	4	4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.2	1.2	1.2	1.0	0.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	530	522	517	509	648
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.54	0.91	0.92	1.00	0.55
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.09	1.11	1.02	1.05	0.22
Total algal volume ($mm^{3} \cdot m^{-3}$)	1110	664	493	508	237
Total algal carbon ($mg\ C \cdot m^{-3}$)	125	82	65	58	20

Appendix Table 33. Physical, chemical and biological data from Great Central Lake, Stn.2, April 16, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	9.1	8.0	7.1	5.1	4.6
Total dissolved solids ($mg \cdot L^{-1}$)			24.7		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	387	490	565	285	595
Nitrate ($\mu g\ N \cdot L^{-1}$)	10	10	11	15	20
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.5	0.8	0.8	0.8	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	900	780	720	710	850
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.57	0.88	0.89	0.77	0.71
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.58	0.79	0.99	0.86	0.45
Total algal volume ($mm^{3} \cdot m^{-3}$)	496	607	687	512	343
Total algal carbon ($mg\ C \cdot m^{-3}$)	41	49	60	38	27

Appendix Table 34. Physical, chemical and biological data from Great Central Lake, Stn.2, May 21, 1983

Depth (m)	1	3	5	23	40
Temperature (°C)	16	14.4	12.7	5.7	4.8
Total dissolved solids ($mg \cdot L^{-1}$)			21.2		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	186	176	163	221	202
Nitrate ($\mu g\ N \cdot L^{-1}$)	4	4	3	23	32
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	2	2	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	2.0	0.8	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	673	673	658	735	770
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.97	0.92	0.83	0.82	0.42
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.30	1.51	1.51	5.17	0.37
Total algal volume ($mm^{3} \cdot m^{-3}$)	2372	2227	2579	988	191
Total algal carbon ($mg\ C \cdot m^{-3}$)	164	153	178	79	14

Appendix Table 35. Physical, chemical and biological data from Great Central Lake, Stn.2, June 24, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	15.6	15.4	15.2	5.8	5.0
Total dissolved solids ($mg \cdot L^{-1}$)			17.9		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	331	278	196	210	170
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	21
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	2	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	1.2	1.2	0.8	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	360	340	330	630	700
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.21	0.91	1.28	0.99	1.10
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.69	0.81	0.82	1.87	0.74
Total algal volume ($mm^3 \cdot m^{-3}$)	1580	2110	2556	2064	796
Total algal carbon ($mg\ C \cdot m^{-3}$)	127	159	194	151	55

Appendix Table 36. Physical, chemical and biological data from Great Central Lake, Stn.2, July 22, 1983..

Depth (m)	1	3	5	23	40
Temperature (°C)	18.7	18.2	17.0	5.9	5.4
Total dissolved solids ($mg \cdot L^{-1}$)			22.0		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	215	208	132	266	176
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	28	39
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.7	1.7	1.9	1.0	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	700	650	570	1150	1170
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.97	0.69	1.52	1.33	0.84
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.83	0.84	0.77	1.92	0.69
Total algal volume ($mm^3 \cdot m^{-3}$)	2509	2513	1805	3936	840
Total algal carbon ($mg\ C \cdot m^{-3}$)	203	213	160	271	60

Appendix Table 37. Physical, chemical and biological data from Great Central Lake, Stn.2, Aug. 26, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	20.7	20.4	20.1	6.3	5.6
Total dissolved solids ($mg \cdot L^{-1}$)			21.3		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	113	125	152	145	136
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	41	47
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	10	29	27	11
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	320	300	300	620	660
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.13	0.87	0.75	0.36	0.45
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.74	0.83	0.82	0.58	0.90
Total algal volume ($mm^{3} \cdot m^{-3}$)	224	295	284	1734	594
Total algal carbon ($mg\ C \cdot m^{-3}$)	36	47	45	108	38

Appendix Table 38. Physical, chemical and biological data from Great Central Lake, Stn.2, Sept. 23, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	17.8	17.6	17.4	6.2	5.3
Total dissolved solids ($mg \cdot L^{-1}$)			22.3		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	608	204	187	178	284
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	13	41
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	4	9	<4	6
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	<1	2	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.5	1.6	1.7	1.3	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	530	520	520	770	910
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.81	0.74	0.74	0.82	0.48
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.59	0.61	0.74	1.63	0.51
Total algal volume ($mm^{3} \cdot m^{-3}$)	1181	1205	796	1277	483
Total algal carbon ($mg\ C \cdot m^{-3}$)	116	121	91	99	34

Appendix Table 39. Physical, chemical and biological data from Great Central Lake, Stn.2, Oct. 28, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	13.8	13.6	13.4	6.7	5.7
Total dissolved solids ($mg \cdot L^{-1}$)			19.6		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	159	103		252	142
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	1	23	40
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	1.2	1.4	0.8	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	258	250	238	444	581
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.54	0.67	1.17	0.71	0.50
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.93	0.95	0.94	1.10	0.34
Total algal volume ($mm^{3} \cdot m^{-3}$)	614	668	383	1887	427
Total algal carbon ($mg\ C \cdot m^{-3}$)	80	85	58	133	30

Appendix Table 40. Physical, chemical and biological data from Great Central Lake, Stn.2, Dec. 6, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	6.6	6.5	6.5	5.9	5.3
Total dissolved nitrogen (μg $N \cdot L^{-1}$)	348	333	172	225	217
Nitrate (μg $N \cdot L^{-1}$)	15	15	15	18	44
Ammonia (μg $N \cdot L^{-1}$)	4	4	6	4	<4
Total phosphorus (μg $P \cdot L^{-1}$)	<1	2	2	1	<1
Particulate phosphorus (μg $P \cdot L^{-1}$)	1.1	1.2	1.2	1.1	0.7
Soluble reactive silicon (μg $Si \cdot L^{-1}$)	522	522	509	587	674
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.66	0.65	0.94	0.89	0.59
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.97	0.95	1.07	0.87	0.34
Total algal volume ($mm^3 \cdot m^{-3}$)	452	280	311	464	230
Total algal carbon ($mg\ C \cdot m^{-3}$)	53	38	43	58	19

Appendix Table 41. Physical, chemical and biological data from Henderson Lake, April 16, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	9.6	9.4	9.3	6.7
Total dissolved solids ($mg \cdot L^{-1}$)			78.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	661	344	272	280
Nitrate ($\mu g\ N \cdot L^{-1}$)	6	6	7	12
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	1.0	1.0	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	370	360	320	330
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.21	1.16	0.61	0.36
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.16	1.27	1.13	0.36
Total algal volume ($mm^{3} \cdot m^{-3}$)	381	451	455	429
Total algal carbon ($mg\ C \cdot m^{-3}$)	37	40	39	15

Appendix Table 42. Physical, chemical and biological data from Henderson Lake, May 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.0	13.8	13.7	6.8
Total dissolved solids ($mg \cdot L^{-1}$)			66.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	264	202	408	328
Nitrate ($\mu g\ N \cdot L^{-1}$)	5	4	5	24
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.8	1.2	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	310	279	267	333
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.49	1.64	1.52	1.23
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.94	1.85	2.28	0.24
Total algal volume ($mm^{3} \cdot m^{-3}$)	4354	3197	3388	317
Total algal carbon ($mg\ C \cdot m^{-3}$)	307	228	240	25

Appendix Table 43. Physical, chemical and biological data from Henderson Lake, June 24, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.3	15.2	15.1	7.0
Total dissolved solids ($mg \cdot L^{-1}$)			64.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	123	194	168	149
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	25
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.2	1.0	1.0	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	110	70	60	220
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.80	0.81	1.03	0.89
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.89	1.87	1.66	0.47
Total algal volume ($mm^3 \cdot m^{-3}$)	6209	7444	6966	907
Total algal carbon ($mg\ C \cdot m^{-3}$)	484	534	515	67

Appendix Table 44. Physical, chemical and biological data from Henderson Lake, July 22, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	18.1	17.6	17.0	7.4
Total dissolved solids ($mg \cdot L^{-1}$)			55.2	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	224	125	213	169
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	31
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	5		
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	3.1	3.0	1.0	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	210	170	170	470
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.45	1.82	1.74	0.99
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.94	3.91	3.61	0.27
Total algal volume ($mm^{3} \cdot m^{-3}$)	1418	1291	1345	310
Total algal carbon ($mg\ C \cdot m^{-3}$)	192	177	185	28

Appendix Table 45. Physical, chemical and biological data from Henderson Lake, Aug. 26, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	19.7	19.6	19.5	7.8
Total dissolved solids ($mg \cdot L^{-1}$)			56.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	204	174	209	172
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	41
Ammonia ($\mu g\ N \cdot L^{-1}$)	18	6	6	6
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	6	5	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	90	70	60	190
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.24	1.29	1.11	0.34
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.82	3.56	3.62	0.33
Total algal volume ($mm^{3} \cdot m^{-3}$)	3703	5297	5053	402
Total algal carbon ($mg\ C \cdot m^{-3}$)	299	378	387	28

Appendix Table 46. Physical, chemical and biological data from Henderson Lake, Sept. 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.2	17.1	17.1	6.9
Total dissolved solids ($mg \cdot L^{-1}$)			53.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	236	273	185	222
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	4	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	2	4
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.6	2.8	2.5	2.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	270	230	250	230
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.52	1.48	1.75	1.29
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.68	2.67	2.70	2.72
Total algal volume ($mm^3 \cdot m^{-3}$)	1409	1451	1801	986
Total algal carbon ($mg\ C \cdot m^{-3}$)	158	170	190	114

Appendix Table 47. Physical, chemical and biological data from Henderson Lake, Oct. 28, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.4	13.3	13.3	7.9
Total dissolved solids ($mg \cdot L^{-1}$)			54.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	158	133	136	110
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	9	9	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	7	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.7	2.0	1.7	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	125	97	89	161
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.27	1.85	1.19	0.76
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.67	1.56	1.60	0.31
Total algal volume ($mm^{3} \cdot m^{-3}$)	820	597	1711	209
Total algal carbon ($mg\ C \cdot m^{-3}$)	80	64	136	18

Appendix Table 48. Physical, chemical and biological data from Hobiton Lake, April 16, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.4	10.2	10.0	6.7
Total dissolved solids ($mg \cdot L^{-1}$)			21.6	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	269	294	218	194
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	9	10	27
Ammonia ($\mu g\ N \cdot L^{-1}$)	8	<4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.5	1.5	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	990	1080	950	1080
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.08	0.96	0.98	0.98
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.57	1 .85	1.65	0.21
Total algal volume ($mm^{3} \cdot m^{-3}$)	318	240	248	54
Total algal carbon ($mg\ C \cdot m^{-3}$)	34	26	27	7

Appendix Table 49. Physical, chemical and biological data from Hobiton Lake, May 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.5	15.3	15.1	6.8
Total dissolved solids ($mg \cdot L^{-1}$)			14.6	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	240	306	408	222
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	38
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.2	2.8	2.0	1.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	828	824	840	968
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.33	1.72	1.66	1.44
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.08	2.52	1.64	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	3378	3203	3104	72
Total algal carbon ($mg\ C \cdot m^{-3}$)	258	259	233	8

Appendix Table 50. Physical, chemical and biological data from Hobiton Lake, June 24, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.7	16.4	16.1	6.9
Total dissolved solids ($mg \cdot L^{-1}$)			21.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	216	187	240	231
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	40
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	5	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	2.2	2.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	820	780	790	918
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.09	1.45	0.80	1.08
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.78	2.74	1.56	0.32
Total algal volume ($mm^{3} \cdot m^{-3}$)	899	935	498	702
Total algal carbon ($mg\ C \cdot m^{-3}$)	97	104	58	70

Appendix Table 51. Physical, chemical and biological data from Hobiton Lake, July 22, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	19.5	18.4	15.0	6.8
Total dissolved solids ($mg \cdot L^{-1}$)			23.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	285	267	194	287
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	42
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.0	2.1	1.7	0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1370	1420	1490	1600
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.25	1.29	1.37	1.22
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.27	1.42	1.18	0.46
Total algal volume ($mm^{3} \cdot m^{-3}$)	1103	870	909	511
Total algal carbon ($mg\ C \cdot m^{-3}$)	140	123	131	59

Appendix Table 52. Physical, chemical and biological data from Hobiton Lake, Aug. 26, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	20.3	20.2	20.0	7.0
Total dissolved solids ($mg \cdot L^{-1}$)			18.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	235	178	195	288
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1
Ammonia ($\mu g\ N \cdot L^{-1}$)	33	10	11	34
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	5	5	5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	630	680	670	680
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.25	1.22	1.21	1.32
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.39	3.35	3.34	3.47
Total algal volume ($mm^{3} \cdot m^{-3}$)	1234	1204	1174	1364
Total algal carbon ($mg\ C \cdot m^{-3}$)	161	165	165	184

Appendix Table 53. Physical, chemical and biological data from Hobiton Lake, Sept. 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.7	16.5	16.2	7.1
Total dissolved solids ($mg \cdot L^{-1}$)			23.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	334	282	212	266
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	44
Ammonia ($\mu g\ N \cdot L^{-1}$)	6	5	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	9	4
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	3.4	3.4	3.7	1.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	870	860	870	1090
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.14	1.31	1.10	0.62
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.80	2.97	2.92	0.33
Total algal volume ($mm^{3} \cdot m^{-3}$)	3047	3462	3229	211
Total algal carbon ($mg\ C \cdot m^{-3}$)	351	411	344	19

Appendix Table 54. Physical, chemical and biological data from Hobiton Lake, Oct. 28, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.5	13.4	13.3	7.9
Total dissolved solids ($mg \cdot L^{-1}$)			22.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	157	128	213	140
Nitrate ($\mu g\ N \cdot L^{-1}$)	2	2	2	43
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	23
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2	3	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.9	2.2	1.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	315	561	601	767
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	1.20	1.21	1.61	0.75
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.04	1.95	1.93	0.28
Total algal volume ($mm^{3} \cdot m^{-3}$)	769	1116	1102	205
Total algal carbon ($mg\ C \cdot m^{-3}$)	106	133	118	22

Appendix Table 55. Physical, chemical and biological data from Ian Lake, Stn.1, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.6	10.4	10.2	6.8
Total dissolved solids ($mg \cdot L^{-1}$)		30.7		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	195	202	182	197
Nitrate ($\mu g\ N \cdot L^{-1}$)	29	29	29	36
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	2	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1680	1710	1740	1710
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.57	1.10	1.15	1.64
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.09	1.14	1.27	0.19
Total algal volume ($mm^{3} \cdot m^{-3}$)	246	184	234	76
Total algal carbon ($mg\ C \cdot m^{-3}$)	32	26	30	9

Appendix Table 56. Physical, chemical and biological data from Ian Lake, Stn.1, June 14, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.3	14.2	14.1	7.8
Total dissolved solids ($mg \cdot L^{-1}$)			40.8	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	222	199	281	273
Nitrate ($\mu g\ N \cdot L^{-1}$)	30	24	25	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1710	1700	1700	1780
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.85	0.88	1.02	1.14
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.61	1.71	1.60	0.21
Total algal volume ($mm^{3} \cdot m^{-3}$)	514	30	538	51
Total algal carbon ($mg\ C \cdot m^{-3}$)	69	4	67	8

Appendix Table 57. Physical, chemical and biological data from Ian Lake, Stn.1, July 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.3	15.1	14.8	7.8
Total dissolved solids ($mg \cdot L^{-1}$)			24.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	472	309	352	321
Nitrate ($\mu g\ N \cdot L^{-1}$)	25	24	24	41
Ammonia ($\mu g\ N \cdot L^{-1}$)	5	4	4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1840	1850	1837	1900
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.17	0.86	1.04	0.59
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.53	1.29	0.95	0.18
Total algal volume ($mm^3 \cdot m^{-3}$)	260	348	299	111
Total algal carbon ($mg\ C \cdot m^{-3}$)	32	44	39	17

Appendix Table 58. Physical, chemical and biological data from Ian Lake, Stn.1, Aug. 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.6	16.4	16.2	8.8
Total dissolved solids ($mg \cdot L^{-1}$)			34.1	
Total dissolved nitrogen ($ug\ N \cdot L^{-1}$)	339	282	347	263
Nitrate ($ug\ N \cdot L^{-1}$)	23	23	23	47
Ammonia ($ug\ N \cdot L^{-1}$)	4	6	6	7
Total phosphorus ($ug\ P \cdot L^{-1}$)	3	4	5	3
Soluble reactive silicon ($ug\ Si \cdot L^{-1}$)	1830	1840	1840	1860
Bacteria numbers ($10^6 \cdot mL^{-1}$)	0.82	0.87	0.88	0.53
Total chlorophyll ($ug \cdot L^{-1}$)	1.24	0.98	0.87	0.22
Total algal volume ($mm^3 \cdot m^{-3}$)	255	202	166	65
Total algal carbon ($mg\ C \cdot m^{-3}$)	39	29	24	10

Appendix Table 59. Physical, chemical and biological data from Ian Lake, Stn.1, Sept. 13, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.2	14.1	13.9	7.8
Total dissolved solids ($mg \cdot L^{-1}$)			31.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	537	257	281	232
Nitrate ($\mu g\ N \cdot L^{-1}$)	29	26	27	53
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	6	6	12
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1683	1715	1699	1699
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.67	1.97	1.25	0.40
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.80	0.86	0.73	0.26
Total algal volume ($mm^{3} \cdot m^{-3}$)	240	186	142	52
Total algal carbon ($mg\ C \cdot m^{-3}$)	34	29	21	8

Appendix Table 60. Physical, chemical and biological data from Ian Lake, Stn.1, Oct. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.7	11.6	11.5	7.9
Total dissolved solids ($mg \cdot L^{-1}$)			43.6	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	351	333	280	295
Nitrate ($\mu g\ N \cdot L^{-1}$)	28	28	28	58
Ammonia ($\mu g\ N \cdot L^{-1}$)	13	51	9	11
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	4	4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1890	1890	1890	1840
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.88	0.78	1.00	0.61
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.70	0.49	0.49	0.15
Total algal volume ($mm^3 \cdot m^{-3}$)	225	223	220	131
Total algal carbon ($mg\ C \cdot m^{-3}$)	34	32	33	20

Appendix Table 61. Physical, chemical and biological data from Ian Lake, Stn.2, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.1	10.0	9.9	6.8
Total dissolved solids ($mg \cdot L^{-1}$)		48.1		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	251	247	234	249
Nitrate ($\mu g\ N \cdot L^{-1}$)	35	35	36	41
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1570	1570	1560	1560
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.67	1.56	1.55	1.70
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.61	0.81	0.75	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	111	134	123	54
Total algal carbon ($mg\ C \cdot m^{-3}$)	17	20	18	6

Appendix Table 62. Physical, chemical and biological data from Ian Lake, Stn.2, June 14, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.7	13.6	13.4	7.2
Total dissolved solids ($mg \cdot L^{-1}$)			41.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	271	269	269	298
Nitrate ($\mu g\ N \cdot L^{-1}$)	34	35	35	47
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	<1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1600	1590	1610	1580
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.57	1.63	1.14	1.15
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.20	0.98	1.21	0.19
Total algal volume ($mm^{3} \cdot m^{-3}$)	282	260	281	49
Total algal carbon ($mg\ C \cdot m^{-3}$)	42	39	39	8

Appendix Table 63. Physical, chemical and biological data from Ian Lake, Stn.2, July 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.1	14.7	14.4	6.7
Total dissolved solids ($mg \cdot L^{-1}$)			31.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	309	403	376	297
Nitrate ($\mu g\ N \cdot L^{-1}$)	28	29	28	48
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	10	6	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1690	1680	1700	1690
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.08	1.10	0.80	0.79
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.31	0.94	0.80	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	575	388	418	156
Total algal carbon ($mg\ C \cdot m^{-3}$)	64	45	45	20

Appendix Table 64. Physical, chemical and biological data from Ian Lake, Stn.2, August 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.0	16.8	16.5	8.6
Total dissolved solids ($mg \cdot L^{-1}$)			38.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	373	461	512	387
Nitrate ($\mu g\ N \cdot L^{-1}$)	24	22	22	43
Ammonia ($\mu g\ N \cdot L^{-1}$)	5	6	5	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	3	5	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1700	1710	1620	2000
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	1.12	1.12	1.02	0.67
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.23	0.96	0.93	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	287	206	204	116
Total algal carbon ($mg\ C \cdot m^{-3}$)	43	27	27	17

Appendix Table 65. Physical, chemical and biological data from Ian Lake, Stn.2, Sept. 13, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.9	14.8	14.7	6.2
Total dissolved solids ($mg \cdot L^{-1}$)			44.4	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	265	358	276	216
Nitrate ($\mu g\ N \cdot L^{-1}$)	31	29	31	56
Ammonia ($\mu g\ N \cdot L^{-1}$)	18	8	8	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1584	1572	1568	1448
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.14	1.13	1.59	0.82
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.60	0.79	0.64	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	115	147	144	87
Total algal carbon ($mg\ C \cdot m^{-3}$)	18	22	19	13

Appendix Table 66. Physical, chemical and biological data from Ian Lake, Stn.2, Oct. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	12.3	12.2	12.2	6.6
Total dissolved solids ($mg \cdot L^{-1}$)			46.9	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	312	286	286	291
Nitrate ($\mu g\ N \cdot L^{-1}$)	31	31	31	55
Ammonia ($\mu g\ N \cdot L^{-1}$)	8	17	19	8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	4	4	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1710	1730	1710	1580
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.72	0.95	1.08	0.56
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.36	0.31	0.34	0.11
Total algal volume ($mm^{3} \cdot m^{-3}$)	171	182	153	118
Total algal carbon ($mg\ C \cdot m^{-3}$)	26	28	24	18

Appendix Table 67. Physical, chemical and biological data from Kennedy Lake, Stn.1, April 15, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	10.1	10.0	9.8	9.6	9.1	8.1	7.8	7.5	6.9
Total dissolved solids ($mg \cdot L^{-1}$)					23.5				
pH			7.1			6.8			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			12.04			12.04			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.57			4.31			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		286		373	241				336
Nitrate ($\mu g\ N \cdot L^{-1}$)		40		40	41				52
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		< 4	4				< 4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		1	2				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0		1.2	1.2				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		550		580	500				550
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.53		0.89	1.10				0.87
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.06		1.11	0.97				0.15
Total algal volume ($mm^3 \cdot m^{-3}$)		562		675	386				79
Total algal carbon ($mg\ C \cdot m^{-3}$)		53		61	40				8
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.15	0.28	0.35	0.40	0.32	0.08	0.11	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.10	0.14	0.13	0.14	0.16	0.00	0.03	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.05	0.14	0.22	0.26	0.16	0.09	0.08	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m\text{-}3.\ h^{-1}$)	0.14	0.22	0.26	0.25	0.23	0.00	0.09	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m\text{-}3.\ h^{-1}$)	0.04	0.08	0.13	0.11	0.07	0.00	0.06	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.01	0.06	0.09	0.15	0.09	0.10	0.02	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 68. Physical, chemical and biological data from Kennedy Lake, Stn.1, May 19, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	15.0	14.8	14.6	14.4	14.0	10.7	9.0	7.5	6.7
Total dissolved solids ($mg \cdot L^{-1}$)					23.1				
pH			7.2			6.9			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			12.92			13.56			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.67			4.48			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		180		232	367				395
Nitrate ($\mu g\ N \cdot L^{-1}$)		8		8	8				54
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		3		3	3				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		2.2		2.2	2.0				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		468		449	457				561
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.82		0.72	0.75				0.69
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.88		5.18	4.97				0.29
Total algal volume ($mm^3 \cdot m^{-3}$)		12618		11244	12421				106
Total algal carbon ($mg\ C \cdot m^{-3}$)		850		749	826				10
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.41	3.69	3.45	3.12	2.47	0.97	0.47	0.27	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.90	1.30	1.20	1.06	0.98	0.46	0.13	0.20	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.51	2.39	2.25	2.06	1.49	0.51	0.34	0.07	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.97	2.03	1.72	1.63	1.40	0.74	0.31	0.27	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.07	0.73	0.52	0.57	0.42	0.28	0.18	0.07	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.44	1.66	1.73	1.49	1.07	0.23	0.16	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 69. Physical, chemical and biological data from Kennedy Lake, Stn.1, June 23, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	15.9	15.7	15.5	15.3	14.8	12.7	11.6	8.6	7.2
Total dissolved solids ($mg \cdot L^{-1}$)					25.6				
pH			6.8			6.8			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			13.17			13.17			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.33			4.44			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		231		232	172				256
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				68
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	<4				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		3	2				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		2.0		1.8	2.5				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		190		190	200				450
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.73		1.05	0.77				0.50
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.92		4.83	5.29				0.71
Total algal volume ($mm^3 \cdot m^{-3}$)		14420		17020	14244				791
Total algal carbon ($mg\ C \cdot m^{-3}$)		1112		1275	1076				60
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	3.32	3.47	2.50	0.70	1.14	0.08	0.30	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.87	1.91	1.02	0.00	0.61	0.08	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.45	1.56	1.48	1.54	0.53	0.00	0.08	0.03	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.39	1.79	1.68	0.00	0.74	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.52	0.00	0.66	0.79	0.13	0.00	0.03	0.03	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.93	1.68	0.82	0.75	0.40	0.12	0.05	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 70. Physical, chemical and biological data from Kennedy Lake, Stn.1, July 21, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	19.0	18.7	18.4	18.0	15.2	12.6	11.1	9.3	7.8
Total dissolved solids ($mg \cdot L^{-1}$)					23.7				
pH			7.0			7.0			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			13.37			18.08			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.03			5.51			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		252		207	224				185
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				73
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		4	11				14
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		4		4	3				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		2.2		2.0	2.5				0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		550		470	540				860
Bacteria numbers ($X10^6 \cdot mL^{-1}$)		0.95		0.86	0.34				0.56
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.05		4.40	4.78				0.76
Total algal volume ($mm^3 \cdot m^{-3}$)		9129		9554	10548				2753
Total algal carbon ($mg\ C \cdot m^{-3}$)		847		1058	930				210
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	4.13	7.26	6.50	6.10	3.01	0.41	0.86	0.01	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.91	5.46	4.40	4.16	1.74	0.19	0.66	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.22	1.80	2.10	1.94	1.27	0.22	0.20	0.05	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	3.32	6.10	5.41	4.94	2.40	0.24	0.69	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m-3.h^{-1}$)	0.41	0.64	1.01	0.78	0.66	0.05	0.03	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.81	1.16	1.09	1.16	0.61	0.17	0.17	0.10	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 71. Physical, chemical and biological data from Kennedy Lake, Stn.1, Aug. 25, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	20.9	20.7	20.6	20.4	20.0	14.5	12.2	9.9	8.8
Total dissolved solids ($mg \cdot L^{-1}$)					26.3				
pH			6.9			6.8			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			14.59			13.61			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.37			4.52			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		232		190	148				167
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				80
Ammonia ($\mu g\ N \cdot L^{-1}$)		6		19	10				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		7		7	7				2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		280		260	260				440
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.86		0.99	0.77				0.38
Total chlorophyll ($\mu g \cdot L^{-1}$)		4.10		4.82	3.76				0.48
Total algal volume ($mm^3 \cdot m^{-3}$)		25670		25693	24094				274
Total algal carbon ($mg\ C \cdot m^{-3}$)		2775		2902	2615				23
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	8.92	10.44	10.25	6.90	2.07	0.00	0.21	0.04	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	6.65	7.64	7.81	5.14	1.20	0.00	0.10	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.27	2.80	2.44	1.76	0.87	0.32	0.11	0.09	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	7.72	8.93	9.18	5.86	1.90	0.00	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.07	1.29	1.37	0.72	0.70	0.30	0.00	0.04	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.20	1.51	1.07	1.04	0.17	0.02	0.25	0.05	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 72. Physical, chemical and biological data from Kennedy Lake, Stn.1, Sept. 22, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	17.2	16.9	16.7	16.5	16.2	14.6	12.0	9.2	7.6
Total dissolved solids ($mg \cdot L^{-1}$)					31.2				
pH			6.9			6.8			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			14.20			14.50			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.61			4.98			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		305		201	247				192
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				79
Ammonia ($\mu g\ N \cdot L^{-1}$)		4		4	8				4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		7		4	6				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		5.3		4.9	5.1				1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		570		560	560				670
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.10		0.67	0.99				0.32
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.88		3.03	3.10				0.35
Total algal volume ($mm^3 \cdot m^{-3}$)		3026		4813	4363				234
Total algal carbon ($mg\ C \cdot m^{-3}$)		344		462	437				21
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.98	1.82	2.98	2.22	0.79	0.24	0.22	0.13	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.51	1.15	2.09	1.25	0.15	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.47	0.67	0.89	0.97	0.64	0.45	0.45	0.17	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.68	1.30	2.39	1.53	0.63	0.00	0.21	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.17	0.15	0.30	0.28	0.48	0.17	0.44	0.03	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.30	0.52	0.59	0.69	0.16	0.28	0.01	0.14	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 73. Physical, chemical and biological data from Kennedy Lake, Stn.1, Oct. 27, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	13.2	13.2	13.2	13.1	13.1	13.0	12.8	11.6	8.8
Total dissolved solids ($mg \cdot L^{-1}$)					32.8				
pH			6.6			6.5			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			13.27			13.27			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			5.50			6.05			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		111		120					168
Nitrate ($\mu g\ N \cdot L^{-1}$)		12		12	12				63
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	5				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		4		3	3				2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.4		2.1	2.6				1.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		282		282	282				375
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.86		0.84	1.29				0.65
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.64		2.31	2.30				0.31
Total algal volume ($mm^3 \cdot m^{-3}$)		5074		4816	4841				222
Total algal carbon ($mg\ C \cdot m^{-3}$)		395		380	382				20
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	3.61	4.05	3.81	3.70	1.63	0.53	0.05	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.19	0.98	0.83	0.74	0.35	0.28	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.42	3.07	2.98	2.96	1.28	0.25	0.17	0.27	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.95	2.23	2.25	1.94	0.98	0.53	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.76	1.25	1.42	1.20	0.63	0.25	0.05	0.11	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.66	1.82	1.56	1.76	0.65	0.00	0.12	0.16	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 74. Physical, chemical and biological data from Kennedy Lake, Stn.2, April 15, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	10.2	9.9	9.7	9.6	9.2	8.8	8.2	7.5	6.6
Total dissolved solids ($mg \cdot L^{-1}$)					22.4				
pH			6.8			6.6			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			8.72			8.60			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.13			3.43			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		308		326	277				289
Nitrate ($\mu g\ N \cdot L^{-1}$)		17		17	16				18
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	4				4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1		2	1				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.2		1.2	1.2				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		580		460	510				370
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.88		0.87	0.98				1.26
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.14		1.43	1.32				0.17
Total algal volume ($mm^3 \cdot m^{-3}$)		297		475	711				90
Total algal carbon ($mg\ C \cdot m^{-3}$)		39		51	66				10
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.61	1.22	1.38	1.56	0.18	0.10	0.00	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.41	0.84	0.70	0.91	0.04	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.20	0.38	0.68	0.65	0.14	0.12	0.00	0.04	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.59	1.09	1.12	1.19	0.12	0.04	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.18	0.25	0.42	0.28	0.08	0.06	0.00	0.04	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.02	0.13	0.26	0.37	0.06	0.06	0.00	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 75. Physical, chemical and biological data from Kennedy Lake, Stn.2, May 19, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	14.9	14.8	14.6	14.5	14.2	13.3	8.9	7.6	6.3
Total dissolved solids ($mg \cdot L^{-1}$)					14.9				
pH			6.6			6.6			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			9.09			8.60			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.41			3.35			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		312		258	299				321
Nitrate ($\mu g\ N \cdot L^{-1}$)		2		3	3				22
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1		<1	<1				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0		1.2	1.2				1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		460		440	450				440
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.49		0.62	0.60				0.77
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.73		1.55	1.74				0.27
Total algal volume ($mm^3 \cdot m^{-3}$)		1003		847	945				82
Total algal carbon ($mg\ C \cdot m^{-3}$)		102		84	94				8
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.82	1.68	1.27	1.31	1.14	0.30	0.13	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.27	0.82	0.37	0.64	0.60	0.16	0.04	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.55	0.86	0.90	0.67	0.54	0.14	0.09	0.10	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.36	0.98	0.62	0.74	0.87	0.30	0.11	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.09	0.16	0.25	0.10	0.27	0.14	0.07	0.05	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.46	0.70	0.65	0.57	0.27	0.00	0.02	0.05	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 76. Physical, chemical and biological data from Kennedy Lake, Stn.2, June 23, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	16.5	16.4	16.4	16.3	16.1	15.4	12.1	9.0	7.2
Total dissolved solids ($mg \cdot L^{-1}$)					20.1				
pH			6.6			6.7			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			11.96			11.06			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.78			3.94			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		256		230	174				179
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				21
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	<4				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1		<1	<1				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.5		1.2	1.0				0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		350		350	350				360
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.63		0.46	0.45				0.56
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.16		1.43	1.43				0.23
Total algal volume ($mm^3 \cdot m^{-3}$)		1138		1266	1564				137
Total algal carbon ($mg\ C \cdot m^{-3}$)		99		112	138				14
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.02	1.28	0.71	1.38	0.61	0.14	0.00	0.01	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.40	0.84	0.00	0.77	0.40	0.09	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.62	0.44	0.72	0.61	0.21	0.05	0.33	0.02	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.63	0.86	0.40	1.08	0.45	0.12	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.23	0.02	0.41	0.31	0.05	0.03	0.26	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.39	0.42	0.31	0.30	0.16	0.02	0.07	0.07	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 77. Physical, chemical and biological data from Kennedy Lake, Stn.2, July 21, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	18.2	18.1	17.9	17.6	17.0	13.5	12.1	9.0	7.8
Total dissolved solids ($mg \cdot L^{-1}$)					23.9				
pH			7.1			6.8			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			12.97			8.50			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.74			2.80			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		173		203	190				189
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				22
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	<4				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1		<1	1				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.7		0.9	0.6				0.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		710		710	710				700
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		1.03		0.88	0.78				0.70
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.72		0.88	1.01				0.25
Total algal volume ($mm^3 \cdot m^{-3}$)		1382		1027	1275				229
Total algal carbon ($mg\ C \cdot m^{-3}$)		155		116	139				25
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.99	0.89	1.46	1.12	0.40	0.09	0.07	0.02	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.45	0.25	0.15	0.71	0.23	0.09	0.07	0.02	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.54	0.64	1.31	0.41	0.17	0.00	0.00	0.00	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m\text{-}3.{}_h{}^{-1}$)	0.60	0.00	0.97	0.72	0.40	0.09	0.05	0.02	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m\text{-}3.{}_h{}^{-1}$)	0.15	0.00	0.82	0.01	0.17	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.39	1.67	0.49	0.40	0.00	0.00	0.02	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 78. Physical, chemical and biological data from Kennedy Lake, Stn.2, Aug. 25, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	20.5	20.4	20.4	20.3	20.1	17.3	11.6	9.0	7.9
Total dissolved solids ($mg \cdot L^{-1}$)					18.7				
pH			7.0			7.0			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			11.79			9.63			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.57			2.94			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		140		219	205				288
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				35
Ammonia ($\mu g\ N \cdot L^{-1}$)		6		19	13				19
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		2	2				2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		380		380	380				350
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.71		0.43	0.49				0.52
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.79		0.84	0.86				0.25
Total algal volume ($mm^3 \cdot m^{-3}$)		722		756	828				167
Total algal carbon ($mg\ C \cdot m^{-3}$)		86		89	90				18
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.55	1.58	1.35	0.79	0.33	0.00	0.04	0.06	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.67	0.55	0.71	0.45	0.19	0.00	0.03	0.06	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.88	1.03	0.64	0.34	0.14	0.01	0.01	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.94	1.00	0.99	0.54	0.28	0.00	0.02	0.03	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.27	0.45	0.28	0.09	0.09	0.01	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.61	0.58	0.36	0.25	0.05	0.00	0.02	0.03	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 79. Physical, chemical and biological data from Kennedy Lake, Stn.2, Sept. 22, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	17.2	17.2	17.1	17.1	16.8	16.4	14.0	9.3	7.6
Total dissolved solids ($mg \cdot L^{-1}$)					26.4				
pH			6.7			6.6			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			13.30			10.50			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			4.69			4.16			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		155		205	152				166
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1		<1	<1				32
Ammonia ($\mu g\ N \cdot L^{-1}$)		9		<4	8				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2		1	<1				<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.3		1.0	1.3				1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		630		630	650				560
Bacteria numbers ($X10^6 \cdot mL^{-1}$)		0.37		0.45	0.48				0.36
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.11		0.97	0.88				0.20
Total algal volume ($mm^3 \cdot m^{-3}$)		1096		1106	1117				177
Total algal carbon ($mg\ C \cdot m^{-3}$)		149		154	164				21
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.78	1.32	1.26	1.25	0.34	0.00	0.17	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.31	0.26	0.72	0.66	0.04	0.00	0.10	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.47	1.06	0.54	0.59	0.30	0.07	0.07	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	0.53	0.88	0.86	0.95	0.26	0.00	0.17	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	0.22	0.62	0.14	0.29	0.22	0.05	0.07	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.25	0.44	0.40	0.30	0.08	0.02	0.00	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 80. Physical, chemical and biological data from Kennedy Lake, Stn.2, Oct. 27, 1983.

Depth (m)	0	1	2	3	5	7.5	10	15	30
Temperature (°C)	13.8	13.7	13.7	13.6	13.5	13.4	13.2	12.8	9.5
Total dissolved solids ($mg \cdot L^{-1}$)					24.1				
pH			6.5			6.3			
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			11.30			10.56			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			5.03			5.53			
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		136		128	160				96
Nitrate ($\mu g\ N \cdot L^{-1}$)		10		10	10				32
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4		<4	<4				<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1		1	1				1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.1		1.2	1.0				0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		327		331	335				282
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.73		0.81	0.59				0.64
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.95		0.93	0.66				0.18
Total algal volume ($mm^3 \cdot m^{-3}$)									
Total algal carbon ($mg\ C \cdot m^{-3}$)									
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.19	1.70	1.49	2.03	1.03	0.23	0.00	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.27	0.61	0.73	1.06	0.71	0.23	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.92	1.09	0.76	0.97	0.32	0.00	0.00	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.73	0.97	0.81	1.51	0.81	0.23	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.46	0.36	0.08	0.45	0.10	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.46	0.73	0.68	0.52	0.22	0.00	0.14	0.04	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 81. Physical, chemical and biological data from Kitlope Lake, Sept. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.5	9.9	9.7	7.1
Total dissolved solids ($mg \cdot L^{-1}$)			8.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	215	260	303	259
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	12	15	24
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	6	4	4	4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	375	411	399	283
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.14	0.92	1.06	0.55
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.27	1.05	1.27	0.22
Total algal volume ($mm^3 \cdot m^{-3}$)	932	892	834	673
Total algal carbon ($mg\ C \cdot m^{-3}$)	157	158	159	132

Appendix Table 82. Physical, chemical and biological data from Long Lake, Stn.1, April 13, 1983.

Depth (m)	1	3	5	30
Total dissolved solids ($mg \cdot L^{-1}$)			14.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	292	326	272	277
Nitrate ($\mu g\ N \cdot L^{-1}$)	59	59	60	64
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	6	5	9	8
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.2	1.2	1.2	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	940	1000	990	660
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.12	1.16	1.02	0.14
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.76	0.70	0.40	0.09
Total algal volume ($mm^{3} \cdot m^{-3}$)	118	154	73	24
Total algal carbon ($mg\ C \cdot m^{-3}$)	16	21	10	4

Appendix Table 83. Physical, chemical and biological data from Long Lake, Stn.1, May 18, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.4	11.3	11.2	5.0
Total dissolved solids ($mg \cdot L^{-1}$)		16.0		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	187	199	260	277
Nitrate ($\mu g\ N \cdot L^{-1}$)	29	28	28	30
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	2	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.0	1.2	1.5	1.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	786	770	774	913
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.47	0.67	0.69	0.86
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.73	4.45	4.59	0.32
Total algal volume ($mm^{3} \cdot m^{-3}$)	2481	3431	1779	107
Total algal carbon ($mg\ C \cdot m^{-3}$)	209	282	149	13

Appendix Table 84. Physical, chemical and biological data from Long Lake, Stn.1, June 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.5	12.0	10.7	5.5
Total dissolved solids ($mg \cdot L^{-1}$)			11.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	214	184	233	243
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	80
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	6	2	2	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4.2	2.8	2.2	1.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	520	490	480	880
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	1.41	1.25	1.19	0.48
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.80	4.86	3.72	0.31
Total algal volume ($mm^{3} \cdot m^{-3}$)	4142	5903	4056	207
Total algal carbon ($mg\ C \cdot m^{-3}$)	520	599	387	24

Appendix Table 85. Physical, chemical and biological data from Long Lake, Stn.1, July 19, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.2	15.0	14.2	6.4
Total dissolved solids ($mg \cdot L^{-1}$)			9.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	139	163	154	225
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	2	90
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	5	5	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.7	2.2	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	600	550	460	890
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.65	0.80	0.80	0.72
Total chlorophyll ($\mu g \cdot L^{-1}$)	4.45	3.53	2.37	0.20
Total algal volume ($mm^{3} \cdot m^{-3}$)	2968	3092	2236	1486
Total algal carbon ($mg\ C \cdot m^{-3}$)	570	559	407	150

Appendix Table 86. Physical, chemical and biological data from Long Lake, Stn.1, Aug. 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.6	17.3	17.0	6.9
Total dissolved solids ($mg \cdot L^{-1}$)			11.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	198	256	178	271
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	<1	<1	82
Ammonia ($\mu g\ N \cdot L^{-1}$)	22	4	9	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	3	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	5.0	5.5	4.0	1.1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	520	520	510	890
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.75	0.92	0.73	0.39
Total chlorophyll ($\mu g \cdot L^{-1}$)	6.39	4.26	3.64	0.27
Total algal volume ($mm^{3} \cdot m^{-3}$)	5851	1959	2519	306
Total algal carbon ($mg\ C \cdot m^{-3}$)	1048	295	443	40

Appendix Table 87. Physical, chemical and biological data from Long Lake, Stn.1, Sept. 20, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.6	13.9	13.3	5.9
Total dissolved solids ($mg \cdot L^{-1}$)			13.1	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	158	207	158	190
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	100
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	31	8	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.6	2.3	2.3	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	459	435	439	686
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.84	0.77	0.79	0.50
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.68	3.18	3.50	0.31
Total algal volume ($mm^{3} \cdot m^{-3}$)	3389	2219	2072	237
Total algal carbon ($mg\ C \cdot m^{-3}$)	705	500	469	37

Appendix Table 88. Physical, chemical and biological data from Long Lake, Stn.1, Oct. 29, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.9	10.8	10.6	8.5
Total dissolved solids ($mg \cdot L^{-1}$)			18.8	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	170	127		156
Nitrate ($\mu g\ N \cdot L^{-1}$)	20	20	20	51
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	6	7
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.6	2.8	2.5	3.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	545	537	541	565
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	1.53	1.25	1.39	1.06
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.36	2.22	2.22	0.58
Total algal volume ($mm^{3} \cdot m^{-3}$)	1402	1518	1471	810
Total algal carbon ($mg\ C \cdot m^{-3}$)	269	301	278	161

Appendix Table 89. Physical, chemical and biological data from Long Lake, Stn.2, April 13, 1983.

Depth (m)	1	3	5	30
Total dissolved solids ($mg \cdot L^{-1}$)			13.6	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	281	263	298	249
Nitrate ($\mu g\ N \cdot L^{-1}$)	42	43	72	50
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	<4	4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2		
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.2	1.5	1.2	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	860	740	660	1100
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.50	1.39	1.27	0.14
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.59	1.75	1.32	0.22
Total algal volume ($mm^{3} \cdot m^{-3}$)	425	308	295	66
Total algal carbon ($mg\ C \cdot m^{-3}$)	61	47	44	10

Appendix Table 90. Physical, chemical and biological data from Long Lake, Stn.2, May 18, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.8	11.5	11.2	5.9
Total dissolved solids ($mg \cdot L^{-1}$)		11.7		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	258	197	200	258
Nitrate ($\mu g\ N \cdot L^{-1}$)	33	33	35	63
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	<1	<1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.2	1.0	1.2	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	836	789	789	762
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.39	0.37	0.88	0.66
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.75	4.35	3.40	0.37
Total algal volume ($mm^{3} \cdot m^{-3}$)	2379	2500	2104	180
Total algal carbon ($mg\ C \cdot m^{-3}$)	215	210	189	18

Appendix Table 91. Physical, chemical and biological data from Long Lake, Stn.2, June 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.8	14.2	13.2	5.8
Total dissolved solids ($mg \cdot L^{-1}$)			13.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	194	169	179	235
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	60
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	3	2	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4.0	4.0	2.8	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	560	560	520	710
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.13	0.90	0.86	0.62
Total chlorophyll ($\mu g \cdot L^{-1}$)	5.42	5.17	5.02	0.32
Total algal volume ($mm^{3} \cdot m^{-3}$)	5444	7128	9201	302
Total algal carbon ($mg\ C \cdot m^{-3}$)	622	695	920	29

Appendix Table 92. Physical, chemical and biological data from Long Lake, Stn.2, July 19, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.9	16.3	14.8	7.0
Total dissolved solids ($mg \cdot L^{-1}$)			9.2	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	157	292	198	202
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	1	67
Ammonia ($\mu g\ N \cdot L^{-1}$)	< 4	< 4	< 4	< 4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	4	5	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.9	0.9	0.9	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	540	540	520	750
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.74	0.63	0.84	0.82
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.89	4.24	3.94	0.25
Total algal volume ($mm^3 \cdot m^{-3}$)	3952	3744	2872	429
Total algal carbon ($mg\ C \cdot m^{-3}$)	658	576	436	44

Appendix Table 93. Physical, chemical and biological data from Long Lake, Stn.2, Aug. 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.2	17.1	17.0	7.4
Total dissolved solids ($mg \cdot L^{-1}$)			8.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	229	252	222	338
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	<1	58
Ammonia ($\mu g\ N \cdot L^{-1}$)	5	5	5	17
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	4	3	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4.0	4.4	4.5	1.1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	600	550	460	890
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.53	0.66	0.69	0.41
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.93	4.16	3.19	0.24
Total algal volume ($mm^{3} \cdot m^{-3}$)	4290	2805	2556	139
Total algal carbon ($mg\ C \cdot m^{-3}$)	835	529	546	19

Appendix Table 94. Physical, chemical and biological data from Long Lake, Stn.2, Sept. 20, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.9	14.6	14.2	6.6
Total dissolved solids ($mg \cdot L^{-1}$)			15.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	314	183	152	245
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	78
Ammonia ($\mu g\ N \cdot L^{-1}$)	11	5	35	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	5	3	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.3	2.8	2.3	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	423	403	407	554
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.52	1.27	0.81	0.68
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.21	3.85	3.90	0.27
Total algal volume ($mm^3 \cdot m^{-3}$)	2194	2747	2148	110
Total algal carbon ($mg\ C \cdot m^{-3}$)	469	567	443	16

Appendix Table 95. Physical, chemical and biological data from Long Lake, Stn.2, Oct. 29, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.4	11.3	11.3	7.4
Total dissolved solids ($mg \cdot L^{-1}$)			18.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	161	140	249	192
Nitrate ($\mu g\ N \cdot L^{-1}$)	11	10	10	66
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	12	2	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.7	1.7	1.9	0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	472	468	472	545
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.29	1.16	1.23	0.70
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.35	2.30	2.25	0.13
Total algal volume ($mm^{3} \cdot m^{-3}$)	1452	1472	1413	117
Total algal carbon ($mg\ C \cdot m^{-3}$)	302	309	278	16

Appendix Table 96. Physical, chemical and biological data from Muriel Lake, Stn.1, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.7	13.7	10.0	6.4
Total dissolved solids ($mg \cdot L^{-1}$)			23.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	192	158	139	154
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	29
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.0	3.0	2.2	2.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	820	910	940	1050
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.17	0.18	1.02	1.09
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.98	1.97	0.19
Total algal volume ($mm^3 \cdot m^{-3}$)	622	717	915	48
Total algal carbon ($mg\ C \cdot m^{-3}$)	54	62	75	6

Appendix Table 97. Physical, chemical and biological data from Muriel Lake, Stn.1, Aug. 25, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	21.2	21.0	15.5	8.2
Total dissolved solids ($mg \cdot L^{-1}$)			23.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	320	222	111	163
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	40
Ammonia ($\mu g\ N \cdot L^{-1}$)	35	8	6	9
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	3	3	4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	910	1000	840	940
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.52	0.50	0.68	0.54
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.00	0.92	0.78	0.18
Total algal volume ($mm^{3} \cdot m^{-3}$)	558	631	987	354
Total algal carbon ($mg\ C \cdot m^{-3}$)	82	93	108	37

Appendix Table 98. Physical, chemical and biological data for Muriel Lake, Stn.1, Sept. 22, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.8	17.2	15.8	6.9
Total dissolved solids ($mg \cdot L^{-1}$)			28.4	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	255	258	377	509
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	25	10	9	6
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2	3	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.8	1.7	1.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1200	1170	1170	1090
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.50	0.51	0.60	0.58
Total chlorophyll ($ug \cdot L^{-1}$)	0.79	1.01	0.81	0.23
Total algal volume ($mm^{3} \cdot m^{-3}$)	668	786	669	330
Total algal carbon ($mg\ C \cdot m^{-3}$)	98	104	83	40

Appendix Table 99. Physical, chemical and biological data from Muriel Lake, Stn.1, Oct. 27,1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.7	13.5	13.3	7.9
Total dissolved solids ($mg \cdot L^{-1}$)			32.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	157	230		174
Nitrate ($\mu g\ N \cdot L^{-1}$)	5	5	6	9
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	8	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.6	1.6	1.9	1.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	912	920	952	924
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.80	0.93	0.84	0.79
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.10	1.05	0.98	0.98
Total algal volume ($mm^{3} \cdot m^{-3}$)	627	710	434	357
Total algal carbon ($mg\ C \cdot m^{-3}$)	94	92	70	55

Appendix Table 100. Physical, chemical and biological data from Muriel Lake, Stn.2, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.0	13.3	10.0	6.5
Total dissolved solids ($mg \cdot L^{-1}$)			22.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	189	170	154	154
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	<1	<1	28
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.5	2.0	2.0	1.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	930	940	930	1040
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.80	0.93	0.84	0.79
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.77	0.95	1.91	0.18
Total algal volume ($mm^{3} \cdot m^{-3}$)	617	560	1147	46
Total algal carbon ($mg\ C \cdot m^{-3}$)	54	51	86	6

Appendix Table 101. Physical, chemical and biological data from Nimpkish Lake, Stn.1, April 13, 1983.

Depth (m)	1	3	5	30
Total dissolved solids ($mg \cdot L^{-1}$)			24.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	449	302	247	201
Nitrate ($\mu g\ N \cdot L^{-1}$)	83	49	42	10
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	1	3
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	0.8	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1720	2160	1930	1920
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.85	0.93	0.70	1.12
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.29	0.31	0.31	0.22
Total algal volume ($mm^{3} \cdot m^{-3}$)	56	60	56	64
Total algal carbon ($mg\ C \cdot m^{-3}$)	8	8	8	7

Appendix Table 102. Physical, chemical and biological data from Nimpkish Lake, Stn.1, May 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.1	11.0	10.8	6.4
Total dissolved solids ($mg \cdot L^{-1}$)			21.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	185	152	181	205
Nitrate ($\mu g\ N \cdot L^{-1}$)	36	36	36	52
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	0.8	1.0	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1513	1637	1668	1645
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.96	0.91	0.76	0.81
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.28	1.37	1.52	0.21
Total algal volume ($mm^{3} \cdot m^{-3}$)	474	464	440	63
Total algal carbon ($mg\ C \cdot m^{-3}$)	44	47	45	7

Appendix Table 103. Physical, chemical and biological data from Nimpkish Lake, Stn.1, June 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.5	14.4	14.3	8.4
Total dissolved solids ($mg \cdot L^{-1}$)			20.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	330	221	261	185
Nitrate ($\mu g\ N \cdot L^{-1}$)	23	26	33	44
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	1.0	1.0	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1710	1660	1670	1740
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.72	0.96	0.69	0.77
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.62	2.90	1.43	0.24
Total algal volume ($mm^{3} \cdot m^{-3}$)	1731	1734	1378	246
Total algal carbon ($mg\ C \cdot m^{-3}$)	132	136	112	20

Appendix Table 104. Physical, chemical and biological data from Nimpkish Lake, Stn.1, July 19, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.7	15.5	15.2	9.6
Total dissolved solids ($mg \cdot L^{-1}$)			18.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	186	167	193	198
Nitrate ($\mu g\ N \cdot L^{-1}$)	25	23	23	41
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	16	9	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	0.5	0.9	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1540	1580	1580	1710
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.99	0.92	0.86	0.96
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.10	1.46	1.39	0.33
Total algal volume ($mm^{3} \cdot m^{-3}$)	5815	4272	4365	1798
Total algal carbon ($mg\ C \cdot m^{-3}$)	437	326	334	144

Appendix Table 105. Physical, chemical and biological data from Nimpkish Lake, Stn.1, Aug. 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.3	17.2	17.2	11.2
Total dissolved solids ($mg \cdot L^{-1}$)			22.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	202	362	240	253
Nitrate ($\mu g\ N \cdot L^{-1}$)	2	3	2	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	5	<4	4	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.8	1.9	1.8	0.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1540	1580	1580	1710
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.91	0.82	0.68	0.61
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.93	4.17	4.18	0.32
Total algal volume ($mm^{3} \cdot m^{-3}$)	14941	8806	13174	609
Total algal carbon ($mg\ C \cdot m^{-3}$)	877	524	776	42

Appendix Table 106. Physical, chemical and biological data from Nimpkish Lake, Stn.1, Sept. 20, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.0	14.9	14.8	10.6
Total dissolved solids ($mg \cdot L^{-1}$)			25.9	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	172	115	121	166
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	50
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	13	23
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.6	0.8	0.7	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	778	794	794	1428
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.69	0.67	0.75	0.51
Total chlorophyll ($\mu g \cdot L^{-1}$)	6.38	6.32	6.29	0.72
Total algal volume ($mm^{3} \cdot m^{-3}$)	34068	32024	16497	2268
Total algal carbon ($mg\ C \cdot m^{-3}$)	1989	1858	949	135

Appendix Table 107. Physical, chemical and biological data from Nimpkish Lake, Stn.1, Oct. 25, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	13.6	13.5	13.5	12.6
Total dissolved solids ($mg \cdot L^{-1}$)			21.6	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	133	160		211
Nitrate ($\mu g\ N \cdot L^{-1}$)	15	15	15	27
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.9	1.1	1.0	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1057	1077	1061	1206
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.61	0.48	0.98	1.05
Total chlorophyll ($\mu g \cdot L^{-1}$)	4.33	4.15	4.36	2.86
Total algal volume ($mm^{3} \cdot m^{-3}$)	19350	15405	18657	15389
Total algal carbon ($mg\ C \cdot m^{-3}$)	1147	919	1116	886

Appendix Table 108. Physical, chemical and biological data from Nimpkish Lake, Stn.2, April 13, 1983.

Depth (m)	1	3	5	30
Total dissolved solids ($mg \cdot L^{-1}$)			24.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	302	239	323	308
Nitrate ($\mu g\ N \cdot L^{-1}$)	42	44	43	44
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1		2	
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	0.8	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1820	1790	1990	2080
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.88	1.17	1.06	0.98
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.26	0.34	0.33	0.10
Total algal volume ($mm^{3} \cdot m^{-3}$)	61	62	59	25
Total algal carbon ($mg\ C \cdot m^{-3}$)	8	8	8	3

Appendix Table 109. Physical, chemical and biological data from Nimpkish Lake, Stn.2, May 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	10.5	10.4	10.3	8.2
Total dissolved solids ($mg \cdot L^{-1}$)			20.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	205	256	312	301
Nitrate ($\mu g\ N \cdot L^{-1}$)	40	39	39	45
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	0.8	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1668	1649	1649	1676
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.82	0.89	0.88	0.88
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.26	1.20	1.25	0.45
Total algal volume ($mm^{3} \cdot m^{-3}$)	395	360	349	234
Total algal carbon ($mg\ C \cdot m^{-3}$)	35	33	32	19

Appendix Table 110. Physical, chemical and biological data from Nimpkish Lake, Stn.2, June 21, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.2	13.8	13.5	9.3
Total dissolved solids ($mg \cdot L^{-1}$)			24.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	218	190	161	158
Nitrate ($\mu g\ N \cdot L^{-1}$)	25	26	27	48
Ammonia ($\mu g\ N \cdot L^{-1}$)	< 4	< 4	< 4	< 4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	< 1	< 1	< 1	< 1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	0.8	0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1680	1660	1680	1720
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.99	0.90	0.65	0.50
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.56	1.57	1.29	0.29
Total algal volume ($mm^{3} \cdot m^{-3}$)	1964	1778	1314	248
Total algal carbon ($mg\ C \cdot m^{-3}$)	138	129	93	19

Appendix Table 111. Physical, chemical and biological data from Nimpkish Lake, Stn.2, July 19, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.8	15.2	14.8	11.4
Total dissolved solids ($mg \cdot L^{-1}$)			22.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	172	166	175	174
Nitrate ($\mu g\ N \cdot L^{-1}$)	23	23	25	36
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	4	4	9
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	2	<1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.7	0.9	0.5	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1600	1610	1620	1700
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.53	0.64	0.87	0.83
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.10	1.06	0.98	0.33
Total algal volume ($mm^3 \cdot m^{-3}$)	4587	3830	3124	764
Total algal carbon ($mg\ C \cdot m^{-3}$)	354	292	245	64

Appendix Table 112. Physical, chemical and biological data from Nimpkish Lake, Stn.2, August 23, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	16.7	16.6	16.5	10.3
Total dissolved solids ($mg \cdot L^{-1}$)			23.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	198	327	251	175
Nitrate ($\mu g\ N \cdot L^{-1}$)	5	5	6	27
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1		2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.0	1.1	1.1	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1600	1610	1620	1700
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.84	0.53	0.69	0.59
Total chlorophyll ($\mu g \cdot L^{-1}$)	4.70	3.13	3.01	0.70
Total algal volume ($mm^{3} \cdot m^{-3}$)	9477	8329	11539	2186
Total algal carbon ($mg\ C \cdot m^{-3}$)	588	515	702	132

Appendix Table 113. Physical, chemical and biological data from Nimpkish Lake, Stn.2, Sept. 20, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.3	15.2	15.2	11.0
Total dissolved solids ($mg \cdot L^{-1}$)			23.5	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	154	142	134	140
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	70
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	12	8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.5	0.5	0.6	0.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	802	794	790	1256
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.42	0.50	0.69	0.53
Total chlorophyll ($\mu g \cdot L^{-1}$)	5.69	5.29	5.50	3.07
Total algal volume ($mm^3 \cdot m^{-3}$)	24997	30470	33045	12454
Total algal carbon ($mg\ C \cdot m^{-3}$)	1549	1846	2008	760

Appendix Table 114. Physical, chemical and biological data from Nimpkish Lake, Stn.2, Oct. 25, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.1	14.1	14.1	12.9
Total dissolved solids ($mg \cdot L^{-1}$)			20.3	
Total dissolved nitrogen (ug $N \cdot L^{-1}$)	109	153		140
Nitrate (ug $N \cdot L^{-1}$)	6	5	6	12
Ammonia (ug $N \cdot L^{-1}$)	<4	4	4	<4
Total phosphorus (ug $P \cdot L^{-1}$)	1	1	1	1
Particulate phosphorus (ug $P \cdot L^{-1}$)	0.9	0.8	0.9	1.1
Soluble reactive silicon (ug $Si \cdot L^{-1}$)	948	920	920	1009
Bacteria numbers ($10^6 \cdot mL^{-1}$)	0.63	0.62	0.63	1.12
Total chlorophyll ($ug \cdot L^{-1}$)	8.14	6.26	8.13	4.92
Total algal volume ($mm^3 \cdot m^{-3}$)	20577	21069	22945	15408
Total algal carbon ($mg\ C \cdot m^{-3}$)	1262	1290	1400	947

Appendix Table 115. Physical, chemical and biological data from Sproat Lake, Stn.1, April 19, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	12.2	11.7	11.1	10.3	8.2	7.0	6.2	5.8	5.3
Total dissolved solids ($mg \cdot L^{-1}$)				32.3					
pH			7.6		7.3				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			22.36		21.13				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			5.80		5.94				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		252	326	277				211	253
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	4				22	34
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	4				4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1					1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0	1.0	1.0				1.0	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1190	1280	1140				1180	1110
Bacteria numbers ($X10^6 \cdot mL^{-1}$)		0.51	0.64	0.44				0.75	0.45
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.04	0.98	1.11				0.72	0.15
Total algal volume ($mm^3 \cdot m^{-3}$)		579	701	762				285	106
Total algal carbon ($mg\ C \cdot m^{-3}$)		54	66	76				28	9
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.81	1.48	0.96	0.54	0.63	1.49	0.20	1.07	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.09	0.97	0.60	0.03	0.23	0.60	0.10	0.70	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.72	0.51	0.36	0.51	0.40	0.89	0.10	0.37	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.71	1.44	0.60	0.39	0.53	1.02	0.14	0.86	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.62	0.47	0.00	0.36	0.30	0.42	0.04	0.16	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.10	0.04	0.36	0.15	0.10	0.47	0.06	0.21	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 116. Physical, chemical and biological data from Sproat Lake, Stn.1, May 20, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	15.2	14.8	14.0	13.1	12.3	10.8	7.6	5.9	5.1
Total dissolved solids ($mg \cdot L^{-1}$)				32.5					
pH		7.0			7.1				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		22.51			21.96				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.79			6.63				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		214	215	181				188	203
Nitrate ($\mu g\ N \cdot L^{-1}$)		< 1	< 1	< 1				17	29
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2	2	2				1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.8	1.2	0.8				1.2	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1000	1010	1000				1000	1050
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.51	0.76	0.86				0.78	0.61
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.47	0.51	0.59				5.11	0.36
Total algal volume ($mm^3 \cdot m^{-3}$)		413	507	554				1072	185
Total algal carbon ($mg\ C \cdot m^{-3}$)		45	52	4750				104	22
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.14	0.42	0.23	0.37	0.30	0.00	0.69	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.00	0.05	0.00	0.00	0.13	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.25	0.42	0.23	0.32	0.95	0.00	0.56	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.14	0.42	0.19	0.27	0.00	0.00	0.47	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.25	0.42	0.19	0.23	0.43	0.00	0.34	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.04	0.09	0.52	0.00	0.22	0.13	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 117. Physical, chemical and biological data from Sproat Lake, Stn.1, June 28, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	16.6	16.5	16.3	16.1	15.1	12.6	8.3	6.2	5.4
Total dissolved solids ($mg \cdot L^{-1}$)				34.3					
pH		7.0			7.0				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		21.00			17.80				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.29			5.39				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		116	218	186				144	202
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				29	16
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	<4				<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1	<1				<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		<0.2	0.4	0.7				0.8	0.8
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		950	940	930				980	960
Bacteria numbers ($X10^6 \cdot mL^{-1}$)		0.45	0.38	0.39				0.53	0.39
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.41	0.30	0.35				0.69	0.73
Total algal volume ($mm^3 \cdot m^{-3}$)		422	366	278				464	783
Total algal carbon ($mg\ C \cdot m^{-3}$)		54	44	34				38	75
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.18	0.22	0.20	0.07	0.06	0.06	0.13	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.07	0.08	0.04	0.00	0.00	0.00	0.06	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.11	0.14	0.16	0.10	0.11	0.10	0.07	0.02	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.00	0.11	0.12	0.00	0.01	0.00	0.08	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.00	0.03	0.08	0.00	0.06	0.02	0.02	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.28	0.11	0.08	0.13	0.05	0.08	0.05	0.13	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 118. Physical, chemical and biological data from Sproat Lake, Stn.1, July 23, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	19.2	19.2	19.1	19.0	15.4	13.3	8.8	6.5	5.7
Total dissolved solids ($mg \cdot L^{-1}$)				30.4					
pH		7.1			7.4				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.05			23.34				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.62			6.20				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		177	160	255				233	278
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				8	40
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	<4				4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1	<1				1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.3	<0.2	0.6				0.7	0.4
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1510	1520	1510				1600	1620
Bacteria numbers ($x10^{6}$ [illegible]$^{-1}$)		0.46	0.46	0.48				0.32	0.46
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.29	0.32	0.29				2.21	0.31
Total algal volume ($mm^3 \cdot m^{-3}$)		455	492	547				2108	512
Total algal carbon ($mg\ C \cdot m^{-3}$)		53	53	65				170	40
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.27	0.19	0.22	0.35	0.26	0.26	0.14	0.05	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.21	0.11	0.10	0.27	0.14	0.18	0.14	0.05	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.06	0.08	0.12	0.08	0.12	0.08	0.00	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.20	0.18	0.12	0.27	0.26	0.18	0.10	0.03	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.01	0.07	0.02	0.00	0.12	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.07	0.01	0.10	0.08	0.00	0.08	0.04	0.02	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 119. Physical, chemical and biological data from Sproat Lake, Stn.1, Aug. 27, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	20.6	20.5	20.4	20.2	20.0	14.9	9.4	7.0	5.9
Total dissolved solids ($mg \cdot L^{-1}$)				28.0					
pH		7.2			7.3				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.34			23.34				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.36			6.26				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		156	127	188				184	278
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				5	44
Ammonia ($\mu g\ N \cdot L^{-1}$)		20	11	43				35	9
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		3	<1	1				2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		900	860	840				820	900
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.39	0.45	0.30				0.40	0.70
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.44	0.40	0.40				2.96	0.65
Total algal volume ($mm^3 \cdot m^{-3}$)		221	298	250				2204	659
Total algal carbon ($mg\ C \cdot m^{-3}$)		31	38	31				176	47
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.26	0.45	0.57	0.66	0.49	0.62	0.15	0.27	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.25	0.00	0.39	0.43	0.18	0.45	0.03	0.27	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.01	0.80	0.18	0.23	0.31	0.17	0.12	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3.h^{-1}$)	0.00	0.24	0.43	0.49	0.34	0.62	0.15	0.27	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3.h^{-1}$)	0.00	0.59	0.04	0.06	0.16	0.17	0.12	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.39	0.21	0.14	0.17	0.15	0.00	0.00	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 120. Physical, chemical and biological data from Sproat Lake, Stn.1, Sept.28, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	16.7	16.6	16.5	16.4	16.2	16.1	9.5	7.2	5.8
Total dissolved solids ($mg \cdot L^{-1}$)				35.6					
pH		6.9			7.0				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.00			23.00				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		7.05			6.99				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		221	528	182				914	256
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				<1	37
Ammonia ($\mu g\ N \cdot L^{-1}$)		4	12	4				7	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1	<1	1				<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.6	1.3	1.1				1.2	0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		990	990	1010				995	1090
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.78	0.47	0.34				0.50	0.44
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.47	0.46	0.43				2.86	0.57
Total algal volume ($mm^3 \cdot m^{-3}$)		578	504	514				2453	796
Total algal carbon ($mg\ C \cdot m^{-3}$)		64	59	54				205	57
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.40	0.62	0.48	0.39	0.64	0.43	0.34	0.03	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.40	0.48	0.27	0.00	0.34	0.43	0.34	0.03	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.14	0.21	0.41	0.30	0.00	0.00	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.40	0.62	0.48	0.15	0.49	0.43	0.34	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.14	0.21	0.17	0.15	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.00	0.24	0.15	0.00	0.00	0.06	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 121. Physical, chemical and biological data from Sproat Lake, Stn.1, Nov. 8, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	12.2	12.2	12.2	12.2				7.2	5.2
Total dissolved solids ($mg \cdot L^{-1}$)				32.9					
pH		6.8			6.8				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		22.36			22.85				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		7.52			8.21				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		124	230	113				113	93
Nitrate ($\mu g\ N \cdot L^{-1}$)		2	2	2				1	32
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	<4				<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1	<1				<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.0	1.0	0.8				0.7	0.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		722	751	784				772	880
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.76	0.87	0.79				0.63	0.63
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.26	1.11	1.12				0.48	0.54
Total algal volume ($mm^3 \cdot m^{-3}$)		471	392	365				465	749
Total algal carbon ($mg\ C \cdot m^{-3}$)		74	66	50				56	55
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.70	1.66	1.27	0.92	0.39	0.06	0.00	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.91	0.94	0.60	0.23	0.09	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.79	0.72	0.67	0.69	0.30	0.11	0.02	0.06	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.39	1.05	0.95	0.84	0.37	0.03	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.48	0.11	0.35	0.61	0.28	0.08	0.02	0.04	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.31	0.61	0.32	0.08	0.02	0.03	0.00	0.02	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 122. Physical, chemical and biological data from Sproat Lake, Stn.1, Dec. 7, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	7.2	7.2	7.2	7.0	5.3
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	300	276	195	203	357
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	9	9	9	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	5	4	8
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.9	1.0	1.0	1.0	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	870	782	813	856	883
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.05	1.31	0.66	0.92	0.67
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.98	1.01	1.09	0.92	0.45
Total algal volume ($mm^3 \cdot m^{-3}$)	361	409	394	490	400
Total algal carbon ($mg\ C \cdot m^{-3}$)	42	42	47	56	30

Appendix Table 123. Physical, chemical and biological data from Sproat Lake, Stn.2, April 19, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	14.0	13.0	10.9	9.6	7.8	7.0	6.6	6.0	5.4
Total dissolved solids ($mg \cdot L^{-1}$)				36.0					
pH			7.4		7.4				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)			22.60		22.60				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			5.97		6.11				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		249	284	278				370	316
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				23	34
Ammonia ($\mu g\ N \cdot L^{-1}$)		4	4	8				<4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1	<1				1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		1.2	1.0	1.0				1.0	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		900	1000	1080				1230	1240
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.62	0.64	0.56				0.97	0.33
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.62	0.62	0.74				1.53	0.23
Total algal volume ($mm^3 \cdot m^{-3}$)		780	868	1092				695	103
Total algal carbon ($mg\ C \cdot m^{-3}$)		64	68	87				58	8
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.20	0.06	0.20	0.46	1.01	0.00	0.17	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.20	0.01	0.00	0.32	0.75	0.00	0.07	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.05	0.70	0.14	0.26	0.01	0.10	0.00	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.09	0.00	0.13	0.46	0.97	0.00	0.17	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.00	0.00	0.63	0.14	0.22	0.00	0.10	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.11	0.19	0.07	0.00	0.04	0.07	0.00	0.01	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 124. Physical, chemical and biological data from Sproat Lake, Stn.2, May 20, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	15.5	15.3	14.1	13.5	12.0	9.0	6.5	5.8	5.3
Total dissolved solids ($mg \cdot L^{-1}$)				35.1					
pH		7.0			7.0				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		22.56			23.49				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.83			7.14				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		171	279	158				138	179
Nitrate ($\mu g\ N \cdot L^{-1}$)		< 1	< 1	< 1				17	32
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		2	2	2				1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.8	1.0	1.0				1.2	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1060	1064	1053				1146	1184
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.56	0.62	0.52				0.51	0.80
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.34	0.37	0.47				5.80	0.41
Total algal volume ($mm^3 \cdot m^{-3}$)		421	342	424				1359	186
Total algal carbon ($mg\ C \cdot m^{-3}$)		36	33	33				112	15
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.15	0.00	0.13	0.00	0.00	0.33	0.00	0.00	
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.20	0.15	0.41	0.21	0.16	0.49	0.09	0.00	
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.05	0.15	0.00	0.00	0.09	0.49	0.00	0.00	
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.15	0.00	0.63	1.13	0.07	0.00	0.30	0.02	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 125. Physical, chemical and biological data from Sproat Lake, Stn.2, June 28, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	18.2	18.0	17.7	17.3	15.8	13.3	8.4	6.5	5.7
Total dissolved solids ($mg \cdot L^{-1}$)				33.6					
pH		7.1			7.0				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.00			23.39				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.83			6.98				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		206	135	168				190	253
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				18	41
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	<4				<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	<1	<1				1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.6	0.7	0.7				1.0	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		970	990	980				1060	1140
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)		0.40	0.76	0.63				0.40	0.53
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.30	0.35	0.37				1.76	0.57
Total algal volume ($mm^{3} \cdot m^{-3}$)		335	440	427				1243	554
Total algal carbon ($mg\ C \cdot m^{-3}$)		40	51	50				107	45
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.23	0.12	0.32	0.42	0.42	0.38	0.46	0.02	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.17	0.09	0.24	0.22	0.25	0.24	0.32	0.02	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.06	0.03	0.08	0.20	0.17	0.14	0.14	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	0.18	0.12	0.23	0.31	0.29	0.30	0.33	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m\text{-}3.h^{-1}$)	0.01	0.03	0.00	0.09	0.04	0.06	0.01	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.05	0.00	0.09	0.11	0.13	0.08	0.13	0.04	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 126. Physical, chemical and biological data from Sproat Lake, Stn.2, July 23, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	19.3	19.2	19.1	18.0	16.6	13.3	9.0	6.8	5.9
Total dissolved solids ($mg \cdot L^{-1}$)				33.7					
pH		7.6			7.5				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.69			24.67				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.03			6.44				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		121	307	108				213	181
Nitrate ($\mu g\ N \cdot L^{-1}$)		< 1	< 1	< 1				20	49
Ammonia ($\mu g\ N \cdot L^{-1}$)		< 4	< 4	< 4				< 4	< 4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		< 1	2	< 1				< 1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.5	0.4	0.8				0.7	< 0.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1590	1590	1610				1740	1940
Bacteria numbers ($x10^6 \cdot mL^{-1}$)		0.42	0.36	0.46				0.40	0.39
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.35	0.40	0.43				2.00	0.56
Total algal volume ($mm^3 \cdot m^{-3}$)		321	567	360				3025	197
Total algal carbon ($mg\ C \cdot m^{-3}$)		39	63	46				230	18
Total prim. prod. (>0.2 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.24	0.30	0.36	0.21	0.40	0.64	0.21	0.00	0.00
Fract. prim. prod. (0.2-3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.10	0.22	0.17	0.21	0.39	0.47	0.15	0.00	0.00
Fract. prim. prod. (>3.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.14	0.08	0.19	0.00	0.01	0.17	0.06	0.07	0.00
Fract. prim. prod. (0.2-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.18	0.28	0.29	0.15	0.03	0.10	0.00	0.00	0.00
Fract. prim. prod. (3.0-8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.08	0.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Fract. prim. prod. (>8.0 μm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.06	0.02	0.07	0.06	0.37	0.54	0.31	0.16	0.00

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 127. Physical, chemical and biological data from Sproat Lake, Stn.2, Aug. 27, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	20.7	20.6	20.5	20.3	20.1	16.4	9.5	7.7	6.7
Total dissolved solids ($mg \cdot L^{-1}$)				28.0					
pH		7.2			7.3				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.59			23.10				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.64			6.47				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		220	167	199				151	209
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				8	42
Ammonia ($\mu g\ N \cdot L^{-1}$)		10	10	18				10	6
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1	3	3				2	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		870	860	870				880	1080
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.49	0.39	0.32				0.42	0.71
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.39	0.41	0.38				1.18	0.70
Total algal volume ($mm^3 \cdot m^{-3}$)		186	192	199				953	601
Total algal carbon ($mg\ C \cdot m^{-3}$)		26	25	28				103	45
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.47	0.64	0.93	0.76	0.72	1.13	0.92	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.28	0.39	0.08	0.23	0.26	0.59	0.49	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.19	0.25	0.85	0.53	0.46	0.54	0.43	0.16	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.29	0.36	0.71	0.55	0.51	1.01	0.85	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.01	0.00	0.63	0.32	0.25	0.42	0.36	0.01	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.18	0.28	0.22	0.21	0.21	0.12	0.07	0.15	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 128. Physical, chemical and biological data from Sproat Lake, Stn.2, Sept. 28, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	16.9	16.8	16.6	16.5	16.2	16.0	9.5	6.8	5.6
Total dissolved solids ($mg \cdot L^{-1}$)				34.7					
pH		7.0			7.1				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		21.90			23.60				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.43			6.78				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		206	878	370				227	426
Nitrate ($\mu g\ N \cdot L^{-1}$)		<1	<1	<1				<1	33
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	43	<4				28	5
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		1	<1	2				1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.8	1.0	1.0				1.4	0.9
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		1030	1020	1020				1070	1170
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.34	0.55	0.44				0.68	0.37
Total chlorophyll ($\mu g \cdot L^{-1}$)		0.51	0.52	0.50				3.57	0.67
Total algal volume ($mm^3 \cdot m^{-3}$)		345	380	326				2139	590
Total algal carbon ($mg\ C \cdot m^{-3}$)		48	49	41				195	42
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.26	0.20	0.40	0.37	0.15	0.18	0.00	0.00	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.26	0.05	0.38	0.01	0.13	0.06	0.00	0.00	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.15	0.02	0.36	0.02	0.12	0.22	0.03	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.26	0.20	0.27	0.00	0.14	0.18	0.00	0.00	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m-3 \cdot h^{-1}$)	0.00	0.15	0.00	0.00	0.01	0.12	0.22	0.03	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.13	0.55	0.01	0.00	0.00	0.00	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 129. Physical, chemical and biological data from Sproat Lake, Stn.2, Nov. 8, 1983.

Depth (m)	0	1	3	5	7.5	10	15	23	40
Temperature (°C)	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.5	6.0
Total dissolved solids ($mg \cdot L^{-1}$)				32.9					
pH		6.6			6.7				
Total alkalinity ($mg \cdot L^{-1}$ $CaCO_3$)		23.24			23.10				
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		9.37			8.90				
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)		148	115	278				235	279
Nitrate ($\mu g\ N \cdot L^{-1}$)		21	3	3				2	27
Ammonia ($\mu g\ N \cdot L^{-1}$)		<4	<4	<4				<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)		<1	1	1				<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)		0.9	1.5	1.4				0.9	1.0
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)		826	835	805				718	1043
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)		0.57	0.69	0.80				0.78	0.66
Total chlorophyll ($\mu g \cdot L^{-1}$)		1.33	1.36	1.20				0.77	0.55
Total algal volume ($mm^3 \cdot m^{-3}$)		344	477	359				1268	1279
Total algal carbon ($mg\ C \cdot m^{-3}$)		57	65	59				111	143
Total prim. prod. (>0.2 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	2.25	1.84	1.79	1.22	0.75	0.51	0.14	0.12	
Fract. prim. prod. (0.2-3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.31	0.73	0.75	0.68	0.66	0.44	0.09	0.12	
Fract. prim. prod. (>3.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.94	1.11	1.04	0.54	0.09	0.07	0.05	0.00	
Fract. prim. prod. (0.2-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.88	1.34	1.15	1.07	0.56	0.22	0.04	0.11	
Fract. prim. prod. (3.0-8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.57	0.66	0.40	0.39	0.00	0.00	0.00	0.00	
Fract. prim. prod. (>8.0 µm) ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.37	0.45	0.64	0.15	0.19	0.29	0.10	0.01	

[a]values determined using the potentiometric method (APHA 1976).

Appendix Table 130. Physical, chemical and biological data from Sproat Lake, Stn.2, Dec. 7, 1983.

Depth (m)	1	3	5	23	40
Temperature (°C)	7.6	7.6	7.6	7.5	6.0
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	268	222	203	240	222
Nitrate ($\mu g\ N \cdot L^{-1}$)	8	8	8	9	34
Ammonia ($\mu g\ N \cdot L^{-1}$)	7	7	5	8	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	1	1	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1.2	1.4	1.3	1.5	1.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	913	878	904	874	1096
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.14	0.44	0.96	0.91	0.71
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.67	1.55	1.41	1.15	0.44
Total algal volume ($mm^{3} \cdot m^{-3}$)	386	467	430	484	519
Total algal carbon ($mg\ C \cdot m^{-3}$)	44	47	47	52	42

Appendix Table 131. Physical, chemical and biological data from Yakoun Lake, May 10, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	12.8	11.9	11.2	4.9
Total dissolved solids ($mg \cdot L^{-1}$)			24.7	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	169	159	163	185
Nitrate ($\mu g\ N \cdot L^{-1}$)	8	8	9	31
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	850	820	840	830
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.23	0.33	0.56	1.00
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.18	1.98	2.92	0.22
Total algal volume ($mm^{3} \cdot m^{-3}$)	1058	1165	1774	125
Total algal carbon ($mg\ C \cdot m^{-3}$)	84	93	142	12

Appendix Table 132. Physical, chemical and biological data from Yakoun Lake, June 14, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.6	14.3	14.0	5.8
Total dissolved solids ($mg \cdot L^{-1}$)			36.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	157	201	224	236
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	32
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<0.2	<0.2	0.2	0.2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	770	790	820	850
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.60	1.02	0.92	0.91
Total chlorophyll ($\mu g \cdot L^{-1}$)	4.64	4.72	5.19	0.23
Total algal volume ($mm^{3} \cdot m^{-3}$)	1937	1870	1930	111
Total algal carbon ($mg\ C \cdot m^{-3}$)	200	186	193	12

Appendix Table 133. Physical, chemical and biological data from Yakoun Lake, July 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	15.7	15.5	15.2	6.3
Total dissolved solids ($mg \cdot L^{-1}$)			19.3	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	216	214	236	217
Nitrate ($\mu g\ N \cdot L^{-1}$)	3	1	1	36
Ammonia ($\mu g\ N \cdot L^{-1}$)	8	<4	<4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	5	4	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	790	780	790	890
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.54	0.94	1.52	1.44
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.47	3.55	3.20	0.19
Total algal volume ($mm^3 \cdot m^{-3}$)	8685	10741	7994	222
Total algal carbon ($mg\ C \cdot m^{-3}$)	653	771	586	27

Appendix Table 134. Physical, chemical and biological data from Yakoun Lake, August 17, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	17.5	17.3	17.0	6.6
Total dissolved solids ($mg \cdot L^{-1}$)			24.0	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	289	384	465	315
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	38
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	8	8	7	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2.0	2.0	1.8	0.6
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	670	690	700	850
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.91	1.04	1.64	0.48
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.02	2.54	2.20	0.17
Total algal volume ($mm^{3} \cdot m^{-3}$)	6349	5068	5552	248
Total algal carbon ($mg\ C \cdot m^{-3}$)	488	402	455	30

Appendix Table 135. Physical, chemical and biological data from Yakoun Lake, Sept. 13, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	14.9	14.7	14.4	5.7
Total dissolved solids ($mg \cdot L^{-1}$)			28.4	
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	317	200	259	162
Nitrate ($\mu g\ N \cdot L^{-1}$)	9	8	9	45
Ammonia ($\mu g\ N \cdot L^{-1}$)	113	7	38	<4
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	4	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.8	1.0	0.9	0.7
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	690	646	634	710
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.74	1.06	2.18	1.02
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.64	2.53	2.34	0.21
Total algal volume ($mm^{3} \cdot m^{-3}$)	1696	1882	992	115
Total algal carbon ($mg\ C \cdot m^{-3}$)	177	208	132	17

Appendix Table 136. Physical, chemical and biological data from Yakoun Lake, Oct. 12, 1983.

Depth (m)	1	3	5	30
Temperature (°C)	11.5	11.4	11.3	5.7
Total dissolved solids ($mg \cdot L^{-1}$)		17.9		
Total dissolved nitrogen ($\mu g\ N \cdot L^{-1}$)	376	189	211	266
Nitrate ($\mu g\ N \cdot L^{-1}$)	8	9	8	45
Ammonia ($\mu g\ N \cdot L^{-1}$)	11	4	71	15
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	3
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	0.5	0.5	0.5	0.5
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	810	770	750	780
Bacteria numbers ($X10^{6} \cdot mL^{-1}$)	0.93	0.51	0.88	0.59
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.64	4.03	3.19	0.17
Total algal volume ($mm^{3} \cdot m^{-3}$)	3038	2594	2444	194
Total algal carbon ($mg\ C \cdot m^{-3}$)	343	304	271	28